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THE PRESIDENT'S ADDRESS.

Delivered June 25th.

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THE Premier, Mr. Gladstone, after quoting the statistician who estimates the English-speaking people at the close of the next century at one thousand millions, says, "What a prospect is that of many millions of people, certainly among the most manful and energetic in the world, occupying one great continent." This destiny in numbers is startling, but the assertion of Dr. Döllinger, a German scholar, portrays the culture of the future almost as strikingly when he says that "the intellectual primacy of the whole world is certain to fall to the Anglo-Saxon race." Most of that race will be in America.

Looking to such a future the position of the learned professions is certainly conspicuous—their obligations imperious. Medical men should be loyal to this grand destiny.

An eminent modern critic, in discussing civilization in America, while admitting that we have well solved the political and social problems, asks what have we done to solve the human problem, "the humanization of man in society." The struggle in his own country, he asserts, has resulted in "an upper class materialized, a middle class vulgarized, and a lower class brutalized."

We trust that our efforts have yielded better fruit; and since medical science and medical men are prominent factors in society among every people, we may well ask what they have accomplished, what part they have here taken in the solution of the vital problem. In the *Century of American Medicine*, Prof. E. H. Clarke, in his essay, says:

"It is not an extravagant assertion to say, that in all this turmoil, change, and progress (referring to the revolutions and changes in society, religion, and governments for the past century), medicine has kept abreast of the other natural sciences, of politics, and of theology, and has made equal conquest over authority, error, and tradition," and it may be added, has contributed largely to man's comfort, happiness, and advancement. To intensify this, reference need only be made to some of our triumphs—to vaccination, to anaesthesia, to sanitation, the prevention of pestilence, the lengthening of human life. It is, however, more especially the contributions of the profession in America to which attention is desired at this time. What are we doing in the humanization of man, in the work of civilization?

Are our medical practitioners and our medical teachers

what they should be? We shall see. Criticisms abound concerning the defects of medical education. Those who do not condemn, often ridicule; these criticisms and strictures are made for the most part, it must be said, by gentlemen unacquainted with teaching, without any practical knowledge of the constitution of medical colleges, or of the toil, devotion, and sacrifice made necessary by those engaged in didactic and clinical instruction.

These censorious addresses are delivered before and to a body of professional gentlemen, the peers of any, some of whom have grown gray in the hard service, others are still in the prime of life, with reputations co-extensive with civilization. The rest are young, full of life and enthusiasm, fired with ambition to render loyal service to that profession which they have chosen. Can our system be so defective? The pessimistic orator seems to forget that he is the product of the system of medical education which he is so severely condemning. Some one has said, "By retrospection and introspection an individual, like a profession, may be benefited." In this self-examination we should have but one motive—the elimination of error, the development and support of truth.

Education cannot make all great or equal. It tends, however, to make all safe. In the crucible of private, practical life, evolution asserts itself, and the fittest survive.

In making a retrospect of our profession it may be well to look for a moment at medical teaching in this country.

The way is long between Aristotle and Bichat, and Buckle says that he found no middle-man in this long period; it is darker than it is long. During all this time medicine was not taught legitimately. The renaissance, if it may be so called, began with Hunter and Bichat. No real progress, however, could be made while oxygen remained locked in the silent embrace of all organic and inorganic nature. Priestley, escaping from the religious and political contests, and it may be persecutions, of the old world, came to this country to demonstrate his great phlogiston, oxygen.

Bichat and Hunter restored the proper study of medicine. They represent the turning-point from idealism, speculation, and theory to accurate and close observation. The latter, John Hunter, in 1767 was lecturing and taking students into his own house, and it is curious to know that here, in far-off America, Shippen and his contemporaries in Philadelphia and New York, about the same time or very soon after, began teaching medicine and surgery upon essentially the same plan. Of these men, one who so recently passed away that you can almost hear the sound of his voice and feel his magnetic presence, when speaking of the men who lived at the close of the last and during the early part of this century, said, and justly said, "Not a few of them were the worthy peers of Roux, Abernethy, Crampton, Bell, de Graaf, and Scarpa."

To quote again:

"During the past century, medicine has been enfranchised from superstition, *quasi*-charlatanism, bold empiricism, and speculation, and has developed into a symmetrical science, affiliated with the other natural sciences, studied by the same methods and by the same appliances as they are, and, like them, has been planted upon the solid basis of fact and demonstration."

It may be profitable for us to inquire and determine what part the profession in America has taken in placing medicine upon the high ground which it occupies. What have we done, what are we doing, and what forecast can we make of the future?

At the close of the eighteenth century, Boerhaave declared that all that had been learned up to that time was comprised in three propositions: "Keep the head cool, the feet warm, the bowels open." All other pages in the volume which he left were blanks. Many pages, however, it will not be denied, have been filled during the present century. What have been our contributions? Have they been such as to rank us with the acknowledged conservators of mankind?

In giving attention to this subject, let us for a moment reflect upon the peculiar position of the profession and of medical teaching in this country. For many years (and even now), with few exceptions, medical colleges were the creation of the members of the profession, most often of the faculties composing the schools, without endowment,—indeed, it may be said that almost everything on this continent is endowed, except medical colleges,—without governmental aid, depending for their support upon the sacrifice and money on the part of the gentlemen occupying the chairs. Yes, not only without patronage from the government, but society, from some unknown cause, has ever been against legitimate medicine, depending upon the scientific physician in time of trouble, yet, in the interim, openly supporting all sorts of shams, frauds, and impostors.

Elsewhere, college work is provided for by the State; especially laboratory investigations into the nature and the genesis of disease. Hence, it is not strange that in such departments we may not be so far advanced as our European brethren; but, while they have been engaged in experimental studies, we have developed the practical. But everywhere is seen among us an earnest, a burning desire for higher culture, for more exact and accurate knowledge. Especially is this true of our younger members, and of those about entering the profession.

A movement is being made to concentrate those who have had preliminary advantages—those who enter the profession as college-bred. No objection can be urged to this if it be not too exclusive. All efforts, in fact, to refine our profession without emasculating it, should meet with judicious approval.

THE PHYSICIAN OF THE FUTURE.

Whence are medical students to come? What facilities are now afforded, and what does the future promise for the education of our young men, the class from which the medical student, the "coming doctor," is to be selected? The answer to this question will give some comfort, we trust, to the pessimist, and soothe the restless and at times unreasonable critic. And now as to our resources for this work.

By the last census it was shown that nearly four thou-

sand institutions—schools for higher learning—existed in the United States, and that nearly four hundred of them ranked as colleges and universities. In these are massed, yearly, sixty thousand pupils. They, together with two hundred thousand common or primary schools, in the higher grades of which the curriculum nears that of many colleges at home and abroad a third of a century ago, may be looked upon to supply, year after year, a better material from which medical students will be drafted.

Prof. Charles W. Eliot, in his beautiful and forcible Centennial response, enumerated our educational facilities more generously. He painted our future more hopefully when he spoke of the 8,000,000 children in elementary schools, 250,000 in secondary schools, 60,000 in colleges, with 360,000 teachers to train and develop them.

Every one travelling through the States—especially of the West and South, and those situated in the far-away mountains and on the Pacific—must be impressed with the onward march of public instruction, the gradually increasing general intelligence, and the vast sums that are annually expended for the education of the people.

Public school buildings, by their size, adaptation, and attractive surroundings, give an impression which the most sceptical must feel, a promise of the future which cannot be misread. From such as these scientific medicine must reap a share. Every teacher, every one connected with the examination of candidates for the medical degree, knows—and the knowledge is reassuring—that, year after year, the grade of the medical student is advancing, that the material out of which the practitioner is made is constantly growing better, becoming stronger; in other words, that the preliminary education of our students is steadily becoming more broad and comprehensive. I gave utterance to this view a few years ago, in an address which I had the honor of delivering to the State Medical Society of Ohio. Time, I believe, has confirmed what I then said. This confirmation is seen in our graduates as they go forth to take up the line and battle of life. Are they not the equals of the graduates in other professions, in law and theology? As life advances, are they not the peers of any in all the useful elements of true manhood? Are they not the citizens of best rounded characters, citizens most relied upon by their neighbors in foul as well as fair weather?

Again, in addition to facilities already referred to, the most generous provisions are being made, all over our land, for institutions which will be worthy to be called universities. From these graduates will emerge worthy to rank by the side of those bearing the prized degrees from Oxford, Cambridge, Paris, Heidelberg, or Leipsic.

During the summer of 1888, I witnessed the beginning of a university in California, which in scope and equipment will surpass, probably, any school upon the continent. Should Governor Stanford live to develop his conceptions, that far-off State will have an institution of which not only the Pacific Coast, but our entire country, yes, all civilization, will feel justly proud. It may be so liberally endowed that it will command the best abilities of the world.

Of course, upon such an occasion as this, it would hardly be expected that I should, in detail, refer to the many liberal donations and bequests which have been made by generous citizens for developing higher culture—a more comprehensive education. I will, however, be

pardon for referring to a few, and I may say, without being too enthusiastic, that the future is aglow with promise. The high-hearted examples which have been set will be followed by other favorites of fortune, until this country may surpass the world, not only in common schools, but in her institutions for broader and deeper education.

In looking at this promising future, may we not hope that before another half century closes students from the old world will flock to this, to sit at the feet of the wisdom here installed? Is it too much to hope that, in the not far-off future, the preliminary education of our students will be equal to that required in the best schools of the world?

Defective as has been much of the material, yet have we not produced some marked results? Our best are equal to the best anywhere; mediocrity always and everywhere finds its own. The poor in medicine, the weak brother, however much we may deplore him, however much we may train him, we have, like the poor, always with us. This is the lot of humanity in all lands, among all people, new or old.

A word as to the physical qualities of "The Coming Doctor." Recently a distinguished foreign traveller, in speaking of our educational facilities and national peculiarities, said: "Students are much calmer than their colleagues in Europe. They don't at all trouble themselves about politics or affairs outside their line of duty, and with the practical sense which animates the nation they try to make the best use of their time. They fight no duels, and it is only for health and recreation that they take part in various sports and games." These remarks apply with equal, in fact, with greater force, to medical students.

It is to the country schools, not the city-bred, that medicine must look for many of her strong recruits. Cities too often emasculate—young men are vitiated by indulgence and vice before they become possessed of serious thoughts, before they realize the elements of a healthy, vigorous life. It is this country-bred, this excellent material which is, as we have seen, yearly growing better and better qualified to enter upon the duties of the profession. From these we must look for the men of distinction, the leaders of the future.

Is this picture overdrawn? One word more. In many of the States of the Union, in addition to the liberally supported free schools and schools for higher education, already colleges have been established through the munificence of the General Government, in which the degrees of A.B. and A.M. may be obtained. They are absolutely free colleges, at which the poorest boy in the commonwealth may receive a classical education. And here you will allow me to say, we cannot insist too strongly upon the necessity of classical education; without it the medical man must ever be at a disadvantage. Without a knowledge of Latin and Greek, sure and distinguished success is uncertain. The student may neglect algebra and the higher mathematics, but let him, by all means, have a liberal knowledge of languages.

At the last commencement of one of our Western schools, "forty per cent. of the graduating class had been admitted on diplomas from literary or scientific colleges. The balance of the class had received from one to five years of academic or collegiate instruction."

This college is without endowment—depending entirely upon the learning, devotion, and sacrifice of the faculty.

But to return. Prominent among the States in providing institutions for advanced culture, the great frontier State, Texas, claims a high position. The University of Texas will be one of the most liberally endowed; millions of acres of land have been donated for University purposes. There, in that Empire State, may yet be seen one of the greatest schools of literature, science, and philosophy on the Western Continent. The University of Virginia, projected in the early days of the century, by her great commoner, Thomas Jefferson, has yearly sent forth graduates equal in all the elements of advanced scholarship to those from any school. This may seem high praise, but the records of her alumni justify me. The same may be said of Harvard, Yale, Princeton, Columbia, Cornell, and most of our older institutions. The University of California has already an annual revenue of about \$200,000. The Michigan University, with a yearly income of almost a quarter of a million of dollars, has well nigh two thousand students, taught by more than one hundred teachers.

Let us not, gentlemen, be impatient; the influences are already projected which will give us students equal to—up to—the highest standard of preliminary preparation. If we have accomplished so much in our primitive stage, what may we not expect when all our great preparatory works come fully into action?

From this view of the resources from which medical students are to be drawn, and of the liberal preparations and facilities for their culture, we may well ask, what is the profession doing to profit from such advantages?

Some of the classical schools at Oxford and Cambridge were organized as early as the thirteenth century, but the systematic, scientific study of medicine and surgery came long subsequently—not for four hundred years later—about the middle of the eighteenth century. It was first projected in Great Britain, and soon after in our Atlantic cities. Unlike the Old World, our fathers had a wilderness to conquer before progress could be made. When the Pilgrim Fathers left England, reading and writing were rare accomplishments; chimneys in that country had just been invented, and flock beds were luxuries. The adventurers—the emigrants to these shores from that ancient and imperfect civilization—had much to learn, but in the midst of their pitiable ignorance, facing great hardships and pressing wants, they were quick to provide educational opportunities for all. The result of their efforts are apparent—they are before us. Could more have been accomplished in one century?

MEDICAL SCHOOLS.

Our medical colleges now number a few more than one hundred. They may be classed as: (1) Metropolitan, those in large cities. (2) Medical colleges in less pretentious cities. (3) Medical colleges in small cities. (4) State medical colleges. For convenience, however, we may speak of them as Metropolitan and Provincial.

Before speaking more definitely of our medical institutions, allow me to refer for a moment to the proposition, that medical schools in our country have been developed by the labors, by the self-sacrifice of the profession. As previously stated, it may be said that in this country everything is endowed except medical colleges,

schools for teaching medicine. Yes, all financial responsibilities have been and are assumed by the faculties, by men who give every hour not devoted to "earning the guinea" to college work, and in most instances, without pecuniary reward. It is only recently that the wise, the generous, the favorites of fortune, and a few of the States, have conceived the idea of endowing medical schools, institutions where medicine and surgery can be cultivated without the embarrassments of financial responsibility. In the presence of such facts, the work of the grumbler seems indeed ungracious.

In our metropolitan colleges, every physician may feel a just pride; their graduates, most of them, will compare favorably with those educated anywhere on this earth.

The accomplished Dr. Senn, after a liberal experience with foreign schools, said: "There is no question in my mind, that the average American student learns more in one month than the average German student in three. He learns more, not because he has better teachers or better facilities, but he makes better use of his time. I am satisfied that in our last graduating class I had at least a dozen students, who, after studying three years, would pass a brilliant examination in any English or German university. They would have felt at home, even in a dress coat in Volkmann's klinik passing their final examination."

Provincial schools do praiseworthy, yes, thorough work in training young men, not only in rudimentary branches, but in practical clinical studies. Many supplement these by hospital attendance in the great cities, and by post-graduate courses. It is gratifying to know that these organizations are being established in all of the great medical centres.

The advance in medical education is again most distinctly pronounced by a remark recently made by one of our distinguished fellows, an American-bred physician, of whose fame we are all justly proud. In a conversation, Dr. Battey said: "When I began practice thirty years ago, there was scarcely a graduate within fifty miles of my residence; now, however, there is hardly a practitioner in the same territory who is not a graduate, and, year after year, a portion of our young men leave home to avail themselves of clinical advantages, to attend post-graduate instruction."

Could anything show more forcibly the conservative and steady growth of medical culture?

HAVE MEDICAL COLLEGES INCREASED TOO RAPIDLY?

Should they be established in small cities, where clinical material is limited, where it must be comparatively scarce? Before answering this, it may be well to reflect upon the proposition, that in our own country, as well as elsewhere, great achievements have often been made in the provinces, and not always under the shadow of the universities. One of the great operations waited for years for a metropolitan disciple—one to take it up—and that, too, long after the provinces, at home and abroad, had demonstrated its vital utility, its claim upon the scientific and skilful surgeon.

As our population increased from three to sixty-five millions, the demands for medical men were great—colleges increased necessarily. Have they multiplied in undue proportion?

In answering this question, I beg again to quote from

my beloved master, Samuel D. Gross, to whom this question had been put. After mature deliberation, he said: "Our colleges are not annually graduating one physician for each county in the States and Territories. This is certainly not exceeding the demand." A considerable proportion of those who graduate never enter the ranks—death and desertion claim a large share. It would simply be impossible for the metropolitan schools to graduate all required.

For the introduction of young gentlemen into the profession, there is a mutual responsibility between teachers and preceptors. In very truth it may be said that colleges do their duty, their very best, with the students furnished by the preceptors. Give us liberally educated young gentlemen, and we will furnish graduates worthy of the degree. Medical colleges, however, do not make the physician. They merely furnish the foundation work; the individual must do the rest. In no place is evolution so marked—the fittest will and should survive.

LABORATORY WORK.

Huxley says: "The microscope extends the realm of pathological anatomy to the limits of the invisible world."

"The intimate alliance between morphology and medicine has made the natural history of disease attain a remarkable degree of perfection."

Dr. George M. Sternberg, the distinguished pathologist, recently connected with the Smithsonian Institution, in referring to some of the laboratories established in this country for the study of pathogenic microorganisms, says: "It is no longer necessary to go abroad for instruction in this department of science, since the laboratory of Prof. Welch, in Baltimore, and the Hoagland Laboratory, in Brooklyn, afford facilities which are unsurpassed by any of the laboratories of the old world."

Indeed, it may be said that provisions for the study of pathogenic microorganisms are established in most of the leading schools of this country—in New York, Philadelphia, Boston, Baltimore, and the cities of the West and South.

You will pardon me for mentioning some of the investigators.

Johns Hopkins University has for its director Professor William H. Welch. The Hoagland Laboratory, of Brooklyn, New York, established through the generosity of Dr. C. N. Hoagland, has been built and equipped in the most complete manner for research work in bacteriology and experimental pathology. Professor George M. Sternberg is to be the director of this advanced institution.

At the University of South Carolina, Dr. Meade Bolton, who has had the best of training at Berlin and Göttingen, is at the head of a laboratory. Dr. H. C. Ernst has the direction of a Bacteriological Laboratory in connection with the Harvard School of Medicine.

Prof. James T. Whittaker, who had the honor of being the first American student of Robert Koch, demonstrated, at Cincinnati, in 1882, the tubercle bacillus, after a lecture upon the subject before the College of Physicians of Philadelphia. In 1887 the Medical College of Ohio imported a complete outfit for bacteriological study. The conductors of the laboratory, Drs. Rachford, Cameron, and Freeman, during the first course, had the oppor-

tunity of doing some good work in the discovery of the typhoid bacilli in the reservoir supplied from the Ohio River, then at a very low stage. This discovery led to the general adoption in the city, as advised by leading physicians, of boiling all drinking water, a plan which undoubtedly limited the spread of the disease.

Among others may be mentioned Dr. Prudden, of the College of Physicians and Surgeons, New York; Dr. George A. Kemp, of Brooklyn; Dr. Mall, of Baltimore; Dr. Booker, of the same city; and Dr. Frank S. Billings, of Lincoln, Nebraska.

One of the earliest, most accomplished and accurate cultivators of microorganisms is Dr. James E. Reeves, of Chattanooga. His technique is singularly beautiful. Many of his preparations are to be found in the National Museum.

Dr. Victor C. Vaughan and Dr. Heneage Gibbes conduct laboratory work at Ann Arbor.

The University of Pennsylvania has at the head of its laboratory Dr. John Guitéras, a pathologist who has distinguished himself in the study of the origin and spread of yellow fever.

Thus it will be seen that in all parts of our country—East, West, North, and South—laboratories are being established for original work.

HISTORY OF MEDICAL TEACHING IN THIS COUNTRY.

A brief review of medical teaching in this country will be pardoned—it may be profitable—it will certainly illumine the present, and may be somewhat of interest to the future.

The first medical lectures were delivered by Dr. John Morgan and William Shippen, in 1767, in Philadelphia. Dr. Rush and Dr. Physick soon after participated, and in 1768 the medical department of the University of Pennsylvania was organized; that great school which is steadily advancing to the highest station. Philadelphia was a small, a provincial city at that time; now she is only second to the great metropolis in numerical strength, but second to none in the thorough equipment of her medical schools.

Contemporaneous with Philadelphia, an organization was projected for medical instruction in New York. In 1767, the first steps were taken which resulted in the school, ever since known as the "College of Physicians and Surgeons," one which challenges the confidence of all. The medical colleges of New York, endowed, not by government, but by her public-spirited citizens, have won the honors which they wear so well.

In 1785, the first school was organized in Boston. The chairs were four, and the session four months. Harvard is the outgrowth of this humble beginning of that provincial faculty.

In 1800, the first medical instruction was given in Baltimore; since then, the schools of Maryland have occupied a deservedly high position. Recently one of her citizens made an endowment by which the "Johns Hopkins University" will be equipped for the most thorough work, experimental work, laboratory studies, a range and grade of investigations *en rapport* with the spirit of the times.

This great benefactor has also given to Baltimore one of the most completely equipped hospitals to be found on this earth.

The great Mississippi valley was yet unknown, but

soon after the close of the Revolution emigration began, and, as early as 1799, Dr. Samuel Brown organized the medical department of Transylvania University. Dr. Benjamin Dudley effected a reorganization in 1819. This school, after many prosperous years, having graduated men who acquired distinction at home and abroad, was transferred, or, rather, most of the faculty removed to Louisville, when and where the University of Louisville was founded.

During the early part of the century, medical schools were organized in several of the Eastern States, usually under State or church patronage. Most of them exist to-day. Some of the most distinguished men in our profession have been associated with these institutions.

As the West and South were peopled, medical schools were established in cities and promising towns. As early as 1819, Dr. Daniel Drake secured the charter of the Medical College of Ohio, and had it legally connected with the City Hospital. The faculty constituted the hospital staff, the members of which were required to give clinical lectures—the first forward step on the continent in blending didactic with clinical instruction.

The physicians in South Carolina began medical teaching in 1823, and those of Louisiana in 1835. In both of these States schools of high character have been maintained.

In closing this very brief review of our colleges, metropolitan and provincial, I think it may be said that year after year the standard of the doctorate is being elevated, preliminary examinations and graded courses are being adopted; the smaller schools, to which most blame is attached, whether justly or not, with a disregard of self-interest seldom seen, are yearly reducing the size of their classes by insisting upon higher preliminary education, by extending the curriculum and by graded instruction.

MEDICAL JOURNALS.

Medical journals, metropolitan and provincial, are the heralds, the vanguards of medical progress, the exponents of professional culture. They are closely associated with the colleges in education and in post-graduate instruction. In them appear the best thoughts of the best men; they constitute the great forum of intellectual combat; upon their pages pretension is analyzed and estimated, and worth recognized; that which is new or original is endorsed, or rather encouraged; it is only the plan, the original investigation which is endorsed; the results, the conclusion must be subject to the crucible of test and trial.

The London *Lancet* and *The American Journal of the Medical Sciences* were almost contemporaries—who can overestimate their value—their influence in medical progress. While our journals, both metropolitan and provincial, are freighted with the best thoughts of the best men, yet, it must be confessed that trash and light material—very light material—may be found in all, but the reader, nevertheless, will find much that is not worthless.

The Journal of this Association has won its way to its present high position by its dignified course and its essentially scientific character; but has it reached its full usefulness? A learned and distinguished author, and a highly prized fellow of our Association, at my suggestion, gives his views upon this question.

Dr. Comegys says: The undertaking, seven years ago,

to establish a weekly journal, was a happy conception and has been carried on as successfully as the resources of the Association would admit. To Dr. N. S. Davis unstinted praise is due; proportionate praise is also due the Board of Trustees with whom he has been associated.

"A large number of members believe that it is entirely feasible to enlarge the Journal and give to it increased capacity for usefulness; indeed, that it should be made more fully capable, as the organ of the Association, to assert and maintain the dignity and power of the medical profession as one of the greatest factors in civil life; that to it society must ultimately turn to find not only the resources to assuage the distress arising from the diseases and accidents of life, but for its protection from all those evils that fill the land with apprehension of desolation and ruin.

"We know to what an immense extent we can stop the approach of the pestilences that desolate lands, and which menace, through the paths of commerce, the whole area of civilization. We know what we can do to improve the homes and places of labor of the lower and toiling classes of cities and other crowded centres of population. There is nothing, indeed, connected with our own social state, which the medical profession should not supervise and which it should not have the power to control. A great organ is necessary to enlighten, strengthen, and lead the profession in all directions, to bring to bear its beneficent agency for the correction of the terrible evils of society.

"Such a journal must be made encyclopaedic in character, in which can be found the proceedings of distinguished societies of this country and of Europe, the work of the chief actors of medical progress in all parts of the world. Twelve thousand subscribers would give \$60,000, this would insure \$40,000 from advertisements, making an income of \$100,000, which would sustain one of the grandest journals in the world.

"The *British Medical Journal* in fifteen years has fourteen thousand subscribers and an income of \$125,000. May we not hope to reach this? and when we do, who can compass the good which the American Medical Association will accomplish?"

THE MEDICAL AND SURGICAL LIBRARY AND MUSEUM AT WASHINGTON.

Another important factor in professional culture is the great Library and Museum at Washington, evoked by the efforts of an American-bred physician, John S. Billings. The Library of the Surgeon General's Office of the Army now contains 92,000 volumes and 137,000 pamphlets, being the largest collection of medical literature in the world, and it is not only the largest, but the most useful. This is because it has an Index Catalogue, which not only shows what the Library has of the works of any author, but, for any given subject, indicates all the original articles in journals and transactions, as well as the books and pamphlets which relate to it, and thus forms a medical bibliography which saves an enormous amount of time and labor to those engaged in medical literary research. This catalogue is being published at the rate of one volume a year; nine volumes have been issued and six more will complete the work. The Army Medical Museum is a great pathological school, and now contains over 15,000 specimens, being one of the largest museums in the world, and richer than any other

in illustrations of military medicine and surgery. This Library and Museum are national in scope and character. They have at last been securely placed in a fire-proof building well adapted to their needs, thanks to the efforts of the medical profession, and we should see to it that they are maintained and increased to the highest degree of completeness and efficiency.

The medical profession asks very little of the general Government, but it does ask that these two institutions shall be made as useful as possible. The number of copies of the Index Catalogue which Congress authorizes to be published is hardly sufficient to meet the demand, and the repeated requests for authority to publish an illustrated catalogue of the Museum for distribution to the profession, have not yet received any attention from Congress, and it is time we took the matter in hand. When we, who are the family physicians of our senators and members, say to them, that this is the thing that ought to be done and must be done, it is pretty certain that it will be done. There is nothing that will do more to promote higher medical education, to stimulate research, and to crown American medicine with honor, than to give ample means to this great Library and Museum to obtain materials and to publish widely the results.

MEDICAL AND SURGICAL HISTORY OF THE WAR.

This matchless record of military medicine and surgery is a marked testimony to the profession of our land. Let us for a moment compare it with similar work elsewhere. After the great Crimean war was over, its experiences were collected, weighed, and analyzed; how strange, in the light of present surgery, and in what contrast with the lessons taught in our great conflict, is the record of McLeod upon one vital operation—trephining for fractures of the skull. In his *Notes on the Surgery of the Crimean War*, that distinguished gentleman says:

"If any patients were lost from not having been operated upon, I never saw any of them, but I do know of some patients who died because they were subjected to operation."

And what a fearful commentary upon the military surgery of that campaign McLeod makes when he writes:

"Thus it would seem as if severe fatigue, irregular, and it might be intemperate diet, are less injurious to men with fracture of the skull than the probings, pickings, and trephining which form the more orthodox and approved practice."

It may be truly said that the judicious use of the trephine during the conflict between the States, supplemented after the war by American surgeons, especially by one of our fellows, Prof. W. T. Briggs, led up, led surely, safely, and steadily to the achievements of Victor Horsley, the master of us all in brain surgery.

MEDICAL SOCIETIES.

Our medical societies, local and national, are great factors in professional progress. Not alone are they valuable for their social opportunities, but in and through them a vast amount of valuable matter is presented.

MEDICAL LITERATURE.

Had Sydney Smith been a physician and given to reading, he would not, even in 1820, have asked the

questions, "Who reads an American book?" "What does the world owe to American physicians or surgeons?"

This reverend gentleman, this famous critic, could not have heard of Ephraim McDowell, whose brief paper, detailing his first three cases of ovariotomy, published in the Philadelphia *Eclectic Repertory* in 1817, was of more value, did more for the conservation of human life, than a score of ordinary publications. Our first half century may be poor in books, but it abounded in strong, brave, conscientious and devoted men, who, with the most limited resources, accomplished the grandest results. They compelled success because they deserved it.

The ink was hardly dry upon that cynical pen when anaesthesia was presented by the profession, so poor, as he supposed, in valuable works.

But what country or age can match, in great contributions to the relief of the suffering, McDowell, Sims, Bigelow, Sayre, Battey, and Emmet, and that trinity of men—Wells, Morton, and Jackson—who gave anaesthesia to the world. Think of anaesthesia and of its influence upon the progress of medicine and surgery. But yesterday a writer in the London *Lancet* gave a graphic history of its reception in London; how the great Liston, having a patient who could not nerve himself up to the point of consenting to have a limb amputated for strumous disease of the knee-joint, decided that "if the insensibility could be insured and maintained for one minute, he would amputate." Reflect for a moment on the hesitancy of the great surgeon of University College Hospital, as he stood by the side of that patient; he could hardly believe the novel report as it came from over the sea. Willing and anxious as he was to operate, he hesitated to urge the poor patient to make the experiment—experiment it then was. In a week, however, it was legitimate practice all over the world.

The heart of every American physician is filled with thankfulness when he remembers that in the providence of God this great boon to humanity was vouchsafed to his country. The very ground upon which stands the Massachusetts Hospital is sacred to us all. Associated with the discoverers must ever be the name of Dr. Hayward, who performed the first operation under the strange Lethon. Previous to this, operative surgery was slow, tedious, and almost cruel. Contrast it to-day with what it was previous to 1847. What grand strides it has made under the direct support of anaesthesia and its almost equal co-laborer, antisepsis; the great cavities are invaded, and invaded safely; the abdomen has become a familiar field, and who can forecast the surgery of the brain?

Since Emmet's operation we hear no more, neither in this country nor abroad—neither in London nor Berlin, neither in Paris nor Vienna—of that culmination, that *ultima thule* of ignorance, "ulceration of the os." What a disgrace that term was to the surgery of the world?

The ignorance of diagnosis was only surpassed by the cruel treatment which it evoked, the application of caustics to the tender everted membrane of the cervical canal.

Has the operation, Bigelow's litholapaxy, the crushing and evacuation of a stone at one sitting, been truly estimated? Its adoption in one celebrated case might have changed the destinies of Europe. Previous to Bigelow lithotomy was an uncertain and, in most hands, a cruel operation: "Crush all possible at a short sitting, and allow the fragments to pass *via naturales*." Bigelow

realized that if anaesthesia is safe for two minutes, it is safe for two hours or more; hence, he said, "Crush it at once, and evacuate the bladder by an aspirator." The operation, in proper cases, is as practical as the description is brief and efficient.

The accomplished Edmund Owen, M.B., F.R.C.S., upon calculus says: "With rare exceptions only two operations are now practised—suprapubic lithotomy and crushing with evacuation at a single sitting." A high compliment from an eminent authority.

The story of Ephraim McDowell, though so often repeated, humanity never tires of hearing. To us he belongs, and to us only; we cannot share his fame with another; we would not if we could. Who can measure the relief which his operation has bestowed upon suffering woman?—not only woman, for his was the genius which opened the way for laparotomy in both sexes.

CLOUDS.

What has been accomplished by the profession in this country, self-reliant and, as we have heretofore said, without governmental or social support, is certainly worthy of congratulation, and gives ground for hopes of a rosy-hued future; but alas! there are some dark clouds to be seen—some spots on our sun of promise! Have we inherent defects in our organic law—our *esprit de corps*?

Upon the face of our promising future some omens of evil appear, indications which look not up but down, not forward but backward, not to the elevation but rather toward the degradation of our profession. Heretofore we were an organization into which no species of fraud could enter, pretension, ignorant pretension, stopped at the door. No *ism* or *pathy* was admitted; something more than a diploma, "a legal diploma," was required—a clean bill of conduct, free from false assumption, assumption of universal knowledge, of specific remedies, of imaginary potencies; in fact, of all shams and false claims, a guild in which there was the greatest freedom for the truth, the largest liberty for the right. No vendor of secret remedies was admitted, because of the ignorant presumption in which they were conceived and propagated; but, alas, that we should have fallen upon the evil times when "patented processes" are attempted, when "processes" of valuable remedies are kept secret. These remedies with "patent processes" are in daily use. This is one of the dark spots in the picture. It came in with the "legally qualified practitioner." What is antipyrin, antifebrin, salol, sulphonal? The reliant patient may well propound such questions. Who can answer them? Are we relegated at one fell move back into outer darkness, the associates of vendors of "secret remedies," of "patented processes?" What higher is a "patented process" than a "patented nostrum?" The profession was never so low as to countenance the latter; but have we not in these later days become propagandists of patented, and, therefore, secret processes?

LAWS FOR THE REGULATION OF THE PRACTICE OF MEDICINE.

It may be asked, Has the standard of professional excellence been raised by laws enacted in many of the States for the regulation of the practice of Medicine?

These laws banish the poor creatures without diplomas, but make respectable, *quasi*-respectable, all who have so-

called diplomas from whatever source. Shams and pretenders are in this way made "legal," and claim whatever protection and recognition that term may give or imply. A chartered institution, in most of the States, represents a formal application for incorporation to a Secretary of State, the signature of that officer, and nothing more. The process of graduating from such—the faculty often consisting of but a single person, or a man and his wife—would hardly be called a farce; the subject is too serious. "Legally qualified!" think of it; and yet this legally qualified creature will claim and expect to meet the highest and the purest. Is this an advance upon the requirements of the Code, the morals and *esprit de corps* of which have never been questioned?

What has been the effect of these diplomas? Have they not tended to make vice and presumptuous ignorance respectable?

Let us be true to ourselves; pitch cannot be touched without defilement. Our Profession must be kept pure, or else it will degenerate and sink to the level of a trade.

In State Boards of Health, by the side of physicians, we find these "legally qualified" practitioners. Where lies the responsibility? Is it with us? Our self-examination on this subject should be searching. If we have failed in our duties to humanity, let us be swift to acknowledge it, and be still more eager to correct our error.

The presence of this body of professional gentlemen, representing our entire country, furnishes sufficient argument for the existence of a National organization; one embracing the virtue and strength of the profession, one to which all questions should be referred for just and final decision. Questions will arise, differences of opinion will occur between honest men. We must have some tribunal, some body, to which these questions, these differences of opinion, can be relegated for solution. The golden rule is a principle, not a law; it cannot interpret itself. Its application to life in detail must be defined. In this respect we are like other men and other organizations. Our morale, however, is higher; it has a zeal, a spirit, a hope and confidence peculiarly our own. If we would have our organization pure, we should make it strong—strong enough to eliminate all that is not true or truthful. We are mortals; not transcendentalists. We cannot live as the commune. We must have laws; remembering always that they are not made for the righteous, but for the sinner. "They that be whole need not a physician, but they that are sick." I will not attempt to defend the ethics of our profession. It would be a poor compliment to your intelligence, to your manhood; for there is not a clause in our Code which a gentleman could not cheerfully obey. Organize whatever we may please: Associations of Specialists, of Physicians, of Surgeons; Academies of Physicians; Congresses of Physicians and Surgeons; but let us not lose our loyalty to this parent Association. Projected almost a half century ago, when medical societies were few, it has annually convened—in the North, in the South, in the East, in the West, and in the far West, on the Pacific shore; if you will examine its yearly roster, you will find that it embraced the best and the wisest. Almost all who were present at the beginning are at rest; their places have been filled by worthy men. Thus, yearly new life—new men being added—this Association cannot grow old.

"When a people hold their lives and property as nothing, the enemy has already suffered defeat." So, too, when virtue will not compromise with vice, the victory, although it may be long delayed, will surely come.

Of the American Medical Association, let us unite in saying, *estō perpetua.*

THE ADDRESS IN SURGERY.

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Delivered June 27, 1889.

THE surgery of the century has been of three periods, the preanaesthetic, the anaesthetic, and the modern one. Operative brilliancy characterized the first. The suffering inseparably connected with the use of the knife and the nervous depression resulting therefrom was to be limited chiefly by celerity of execution; hence the swift-moving hand was an essential part of the equipment of the fittest surgeon.

When in the amphitheatre of the Massachusetts General Hospital, "the problem of surgical anaesthesia was definitively solved," a new period began. Pain was no more, and it was permitted to examine earlier and more thoroughly, to remove more extensively, and to operate successfully in regions previously altogether, or in great measure, beyond the reach of art. For twenty years or more, progress was in the line of diagnosis, of development of new and better methods of operating, of extension of the range of surgical interference. Time was no longer an element of prime importance, and the work was regarded as quickly enough done when well and thoroughly done—too much so, in fact, for not seldom the best interests of the patient have been jeopardized by unnecessary delay in execution, that would not have occurred but for the existing profound insensibility. But though operations in this anaesthetic period were without much of the terrors of the olden time, they yet fell far short of producing the wished-for result in preservation of life and early restoration of health. Wound complications were still as ever the bane of surgery, and too often the wisest planned and best executed operation resulted in failure because of the supervention of one form or other of septic infection.

It is scarcely twenty years since patient investigation, careful experimentation, and practical testing began to throw strong, clear light upon that most obscure of the subjects of medical study, the causes of disease. As never before in the history of medicine, truly scientific methods of research have been adopted and pursued by a multitude of trained observers in all civilized countries, and surgery has entered upon its scientific period, in which operator and patient are profiting by the labors of the chemist, the botanist, the physiologist, the physician, equally with those of the practical and experimental surgeon. It seems but yesterday when Lister's early papers startled the world. It is but twenty-two years since the first one was published, yet what enormous advances since then in knowledge, in treatment, and in the field of operative interference! A new department of science, surgical bacteriology, has been created (for what was done prior to 1867 may, for practical purposes, be left out of consideration), and in its development has been worked out the mycotic origin of all those pathological processes

looked upon as inseparable from traumatisms, or almost necessarily associated with them if severe. Suppurations, gangrene, septic infection, erysipelas, tetanus, we know to depend upon the presence or the action of one or other of definite organisms that may be isolated, cultivated, and inoculated. Recognizing the cause it has been comparatively easy to devise methods, more or less perfect in action, to prevent the development or neutralize the influence of it, and there has been worked out an antiseptic and aseptic wound treatment, the results of which are simply marvellous. But just here I must protest against the wisdom or the justice of the sweeping declarations of a few enthusiasts, who see in other than speedy recovery after injury or operation evidences of what they are pleased to consider criminal ignorance or neglect.

The existing strong probability that in any given case septic infection might be prevented, has given warrant for the performance of operations that in preaseptic days were not to be thought of.

Abdominal surgery, that so short a time ago meant scarcely more than the removal of an ovarian tumor too often carried until death was evidently fast approaching, now includes operations upon almost every part of each hollow and solid viscous, and laparotomy has taken its place as a safe, proper, and often indispensable prerequisite to the determination of obscure disease. Penetrating and perforating gunshot wounds, so generally fatal when treated by rest and opium, have in at least forty cases been recovered from after section and suture, and there are now but few surgeons still unconvinced of the wisdom of early active interference. At our last meeting Senn's carefully elaborated and beautiful demonstrations set forth a means of determining the existence and location of intestinal wounds that, if safe, as it has thus far seemed to be, will remove the greatest objection to laparotomy in these cases—the uncertainty in the earlier hours of bowel perforation—and prevent what otherwise will occur, the overlooking of one or more lesions. It is not to be expected that all or any close approximation to all of these very dangerous wounds will be saved by early operation, for great injury will ordinarily be produced by the bullet, be it large or small; but every case that recovers after section and suture may fairly be considered as rescued from an otherwise almost inevitable death. Unquestionably the laying open of the peritoneum and operating upon an abdominal organ has at times been carried too far. Useless work has been performed, and life has been sacrificed, for it is not true (so far certainly as operators in general are concerned) that abdominal section is in itself without danger, doing no harm if it accomplishes no good. But not a day goes by that somewhere or other life is not prolonged and comfort secured by an intraperitoneal ligation, suture, anastomosis, or excision, rendered proper, may we not say possible, only by the aseptic results of scientific discovery and experimentation.

So, too, the diseases and injuries of the other great cavities are being attacked by the surgeon's knife guided by the diagnostic knowledge, the localizing exactness and the technical skill of the physician, the physiologist, and the vivisector.

There has been but a beginning of intrathoracic surgery, though for years empyemas have been treated by free incisions, supplemented not seldom by extensive

excisions of portions of the chest wall, and even in pre-aseptic days deeply lodged foreign bodies were removed. Only very recently has the lung been cut into for the evacuation of abscesses and the treatment of gangrenous areas, such pneumotomies resulting favorably in one-half of the reported cases; and as yet but few subpleural tumors have been attacked. There is every reason for believing that in the near future surgery will be able to render great service to the subjects of not a few forms of thoracic disease now regarded as beyond the reach of art.

The most recent and the most brilliant triumphs have been in the treatment of diseases and injuries of the brain and cord. Nowhere else have our art and science so joined hands in affording relief as here. Tumors removed, foreign bodies taken away and their tracks drained, convulsion-centres excised, serous effusions tapped, life preserved and comfort secured; so reads the record. Much remains to be done in the determination of the trouble, the exact localization of the mischief, the perfection of technique. Not seldom mistakes will be made, errors committed, but it will be more and more demonstrated that the trained mind and the skilful hand working together can recognize and successfully treat otherwise irremediable affections within the skull and spinal column. As the operative procedures necessary for the exposure and removal of the spinous processes and laminæ of the vertebræ are but little dangerous, and as septic meningitis can almost certainly be prevented, a change may reasonably be looked for in the treatment of vertebral fractures, especially those in the lower half of the column. Up to this time the cases in which active interference has been made have almost always been those of long duration, in which existing inflammatory changes in the cord, if nothing worse, could not but prevent any favorable result; but even in these, of late, the patient has been none the worse for an operation. Without doubt, early removal of pressure, whether made by bone or blood it matters not, would save many a one from all those deplorable conditions consequent upon myelitis with which we are unfortunately too familiar.

Is there any good reason why spine fractures should not be treated as skull fractures are? and who would now for a moment think of rest and position as the routine treatment of the latter injuries?

But in this scientific period there has been much more accomplished than extension of the range of operative interference, great and important as this has been. As never before it has been possible to preserve damaged parts and to retain important functions, to replace completely detached pieces of bone and secure adhesion as perfect as of the fragments in a simple fracture, to transfer large areas of integument and engraft pieces of bone, to supply deficiencies in soft or hard parts by skin or bone from dog, rabbit, chicken, or frog. Every department of conservative surgery has been and will yet more be benefited by the preventing of the evils consequent upon the action of minute organisms.

The two diseases that produce the widest destruction to part and to life are tuberculosis and cancer. The former that until the discovery of its causative bacillus was regarded as of rare occurrence in parts belonging to the domain of surgery, is now known to be the producer of the vast proportion of the diseases of bones and joints, and of many of those attacking the skin and more ex-

ternal organs. Primarily, and often for a long time local, if allowed to go on unchecked it affects other and remote regions, perhaps rapidly becoming generalized. What has been learned respecting it—that it may attack any part the blood circulation of which is disturbed by general enfeeblement or local injury of ordinarily not severe character; that the bacilli may be destroyed or become encapsulated; that the softened tissues may, in like manner, be taken up and carried off or shut in temporarily or permanently; that if the diseased focus be completely removed, as it often may, the part and the whole are as if it had never existed, except so far as function is disturbed by the loss of what has been taken away and by the scar tissue resulting.

How has treatment been affected by this knowledge? It is of prime importance that early diagnosis be made. Located in bone or joint, and detected while yet limited, prolonged rest, as absolute as possible, will in the majority of cases, certainly in young subjects, secure destruction, absorption, or encapsulation of organisms or affected cells with resulting restoration to health. Advanced to the stage of caseation and liquefaction, rest may yet be followed by recovery, though ordinarily free drainage, with or without associated removal of the infected tissue, will be of great advantage. Injection of agents, such as iodoform, or the acid phosphate of lime, that will destroy the bacilli and the tuberculous masses, may produce the wished-for cure. But ordinarily it will be better, indeed generally necessary, to remove the affected area either by formal or informal excision or by amputation. Whether diseased joints are best treated by arthrectomies or by typical excisions is one of the questions still *sub judice*, though in the last three years, as never before, it has been shown that formal removals of the larger articulations can in a large proportion of cases be followed by early repair and solidification without suppuration or constitutional disturbance—even at times with recovery of original function. Although it is not likely that it can ever be said with truth that the days of the lame and the hunchbacked have gone by, because of neglect, delay, or generalization of the pathological process, yet we have good reason to believe that further advances in the knowledge of the development and extension of the tuberculous disease will enable the surgeons of the future so to limit, ameliorate, and cure the surgical tuberculous affections as that they will no longer constitute one of the most, if not the most, important and destructive of the external diseases.

Of cancer it may with truth be said we know very little; yet of nothing do we more need knowledge. Much less often met with than tuberculous disease, it is yet of not infrequent occurrence. In our eight largest cities (Boston, New York, Brooklyn, Philadelphia, Baltimore, Chicago, St. Louis, and Cincinnati) during the five years ending December 31, 1888, of 599,684 deaths from all causes, 13,094 were from cancer, 2.19 per cent.; and, as we all know, the disease is not peculiarly an urban one. In five of the eight cities, New York, Chicago, Cincinnati, Brooklyn, and St. Louis, the death-rate was much the same, being, in the order given, 2.1, 2, 2, 1.94, 1.93 per cent. In Boston it was the highest, being 2.98 per cent.; in Baltimore it was 2.4 per cent.; and in Philadelphia 2.28 per cent. In Cincinnati, in the last year, the percentage reached 2.6, while in 1868 it was but 0.55; an altogether exceptional rate, as only once since

has it fallen below 1 per cent., in 1870, when it was 0.8. For these figures I am indebted to the Health Officer, Dr. Stanton. One in fifty, then, of the deaths in an aggregate city population of over five millions is due to this disease; and if we have regard only to the mortality of those within the cancer age—i. e., more than thirty-five years old, about one in twenty of the deaths is thus produced. Even among the carefully selected adult individuals carrying life insurance, who are free, or are supposed to be, from family predisposition to cancer from 2.5 to 3.5 per cent. of the mortality is from this disease.

The statistics just mentioned, and, particularly, the marked contrast between the high death-rate in Boston and the low one in St. Louis, give but little support to the theory of Haviland, that low lands subject to frequent overflows are those in which the disease is most prevalent. In preparing the mortality statistics of the census of 1880, Dr. Billings found that the disease was most prevalent in New England and Southern California, and least so in the South and upon the Mississippi. It is to be hoped that in the preparation of the vital statistics of the next Census such attention may be given to this subject of occurrence and distribution, and such full and complete reports secured as will add materially to our knowledge, and go far toward determining the correctness or incorrectness of the views of the English writer named. Care should be taken to separate, if possible, cases of sarcoma from those of cancer. Hirsch to the contrary notwithstanding, this affection is probably becoming more common throughout the civilized world; certainly is so in our own country and in Great Britain. Increased accuracy in diagnosis will not account for a doubling in twenty years of its mortality-rate in Massachusetts, or in Cincinnati, or in less than twice twenty years in England.

Frequently, if not usually, attacking individuals in good general health (though oftentimes appearing soon after a period of marked mental anxiety and depression), it has regard neither to social conditions nor hygienic surroundings. Unlike consumption, which is often of limited duration, ending in recovery, and at the worst, ordinarily bringing death gently, cancer left to itself very rarely is spontaneously eliminated, is almost inevitably destructive to part and to life, and is often attended with severe physical and mental suffering.

What is its starting-point? An unused long-dormant embryonic cell, at length aroused to activity by local irritation, general enfeeblement, or nervous exhaustion? In all probability, no. An abnormal epithelial development, abnormal because unconfined within its normal limits? But why unconfined? An epithelial cell undergoing proper degenerative changes, but arrested at some point short of its complete alteration? What stops its retrograde movement? Is it of mycotic origin? That it should be so would hardly be more strange than that lupus or leprosy should be. That it is so has not yet been proved. The many investigations that have been made, some of them for a time apparently fruitful, have thus far failed to discover a causative bacillus, unless farther and extended cultivations and inoculations shall prove that Kübasoff has actually found it. Experimental inoculations have again and again produced no specific result, but Lampiasi has claimed that by using a bacillus culture from the blood he succeeded in causing in a healthy part of the patient's skin the growth of a nodule having "an

alveolar stroma with wide meshes, which contained many epithelial cells of different form and size," and Hanau has twice successfully transplanted from rat to rat.

No more inviting field is open to the competent bacteriologists and experimenters of our country (and we have a number of them, as also well-equipped laboratories) than this very one of cancer. Cases are numerous, specimens are being daily secured, and there is no reason why America should not now do full part in settling the vexed questions of nature and origin. The imperative necessities of a struggle for existence, and the intense practicality of a new and developing country, have heretofore prevented any but the very few filled with enthusiasm, or independent of fortune, from engaging in purely scientific studies involving minute investigation and patient labor with often no apparent practical outcome. But the times are changing, and the profession of our country, may and doubtless will ere long, be as well and favorably known in biological research as it has been and is in relation to ovariotomy, to ether, to the hip, to the treatment of stone, to the surgical diseases of women, to abdominal section, to a multitude of affections and the means of treating them.

As we see it in lip or breast or uterus or stomach, or it matters not what part or organ, is cancer a local disease, or but a local manifestation of a constitutional state? The question is still an open one, though the great majority of pathologists and clinicians are now agreed that wherever seated, it is primarily and for a time purely local, whatever may be the general conditions inherited or acquired that permit or favor its development. If not of limited area and capable of complete removal, operative interference can be justified only on the ground of affording temporary relief—unfortunately, all that is accomplished in the majority of cases submitted to the knife. But there is great encouragement in the knowledge that a certain percentage of patients operated upon do recover, that is, remain free from recurrence for three or more years; and that this percentage is larger or smaller, according as the disease is so situated as to be early detected and thoroughly removed, or the contrary. Located in the lower lip or cervix uteri, for example, two out of five patients operated upon get well, in the breast one in eight. Why this great difference? Because, we may believe, of the site itself, and of the degree and rapidity of extension in parts immediately adjacent, and of glandular involvement; in other words, of the likelihood of early and the possibility of complete extirpation, or the opposite. How are to be regarded those cases in which, after five, ten, or twenty years of apparently perfect health, the disease again shows itself and destroys life? As of long quiescence of infected and infecting cells, or of a new and independent affection? The latter explanation certainly makes a far less demand upon our credulity, and it is no more strange that there should be a second than a first attack in a person and tissues possessing an undetermined and unknown receptivity, and such there certainly must be that cancer may be developed at all.

Of nothing are we more certain than of the immense advantage there is in early recognition and speedy removal; and, on the other hand, of the utter uselessness, so far at least as the ultimate result is concerned, of any surgical interference after wide extension has taken place.

In perfecting, therefore, the means of establishing diag-

nosis at an early day, lies an important work in the future. Though consideration of age, of location, of pre-existing long-continued irritation, go far toward settling the nature of a given tumor, and upon such estimation of probabilities action may generally safely be taken, yet, as a rule, certainty of the character of the growth can only be had after scientific determination of its anatomical constitution. Whatever, then, makes it possible safely, easily, and without pain, to remove for microscopic examination a sufficiently extensive piece of the mass to show its deep as well as superficial structures, is of much practical value. A convenient and promising little instrument has lately been given to the profession by Dr. Collins Warren, of Boston.

Physiological and chemical investigations have furnished us with early and reliable evidence of the existence of cancer of the stomach, in absence of the hydrochloric acid in the secretions of that viscus; may not kindred investigations give us like aid when other organs are affected?

The modern and scientific wound treatment now enables the surgeon to remove more extensively, and, at the same time, safely, so that active interference may reasonably be expected to be, and is, attended with much better results than could be looked for a few years ago. Much of the work, though that in the last decade has been done upon internal cancers, has been of questionable utility, chiefly because of its late performance.

What will the future reveal respecting the non-operative treatment? Will a drug or drugs be found to secure the destruction and removal of the morbid mass? May the moderate continued electric current long employed, or powerful interrupted currents "flashed through," produce, as has been claimed for them, entire disappearance of the diseased cells? Can some pathogenic organism be inoculated that, without killing the patient, will break down the malignant growth? We all know what has been done with the micrococcus of erysipelas.

In nothing could this Association do more than in determining by collective investigation and thorough committee work the frequency of occurrence of carcinoma in the country as a whole, and in its several States, the relation borne (if any) to geological formation, the age of appearance, the relative affection of parts and organs, the influence of therapeutic treatment, and the duration of life with and without operation. Five years of such work would suffice to accumulate a mass of statistics of very great value, the study of which could not but advance the interest of patients and practitioners; and in this, as in everything else, "many hands make light work." To physicians, surgeons, and therapeutists the subject is one of prime importance, and only by combined scientific and practical work can it be determined what excites and produces the disease, and what can secure its relief.

As we survey the advances, etiological, diagnostic, and therapeutic, made in the few years just past, that are of the scientific period, and consider, even in the most hurried way, the problems that are yet awaiting solution—problems relating to nature, origin and treatment of the diseases and injuries of parts within the domain of surgery—what may we not reasonably anticipate as the future of our science and art! Accidents must occur, diseases will prevail, no matter how great the triumphs

of preventive medicine. Surgical pathology is but in its infancy. Years ago it was declared that operative surgery had reached its climax. Yet since then operations have over and over again been done within abdomen, chest, and skull, upon the larynx, throat, and spinal cord, that in boldness of conception and brilliancy of execution have no parallel in the history of medicine. The end is not yet, nor will be, while the world over, there are active minds and cunning hands busied with the determination of the existence and extent of surgical affections, and ready and able to remove them, aided more and more by labors of investigators in many departments of science, general as well as medical. Year by year he who may deliver the Address on Surgery will be able to report doubts removed, discoveries made, remedies employed, and operations done.

MEDICAL PROGRESS.

Resection of the Sternum.—In an article on the resection of the sternum in the *Centralbl. f. Chirurg.*, May 25, 1889, DR. G. STEINHEIL says that the operation was first performed by Galen, and used to be most rare. Since the sub-periosteal method was introduced by Ollier it has become more frequent.

Eighty-four cases were reported by Otis as having occurred during the American war, but these Steinheil does not take into consideration, as their history was incomplete. He, therefore, states that thirty-six authentic cases have been recorded. In conclusion he makes the following assertions :

1. The sternum can be successfully resected in part or in its entirety.
2. The difficulty of the operation depends upon the extent of the resection, the portion resected, the cause of the operation, and the method employed, whether sub-periosteal or not.
3. In complicated fractures, especially when resulting from gunshot wounds, the result of the resection depends upon the course of the wound.
4. Chronic inflammatory processes are the most frequent indications for resection of the sternum. The sub-periosteal method is attended by the greatest success, frequently osseous regeneration will follow. The operation is frequently performed for the removal of tumors of the sternum and mediastinum, and also to form an opening in the chest through which the larger vessels may be tied.

Treatment of Tinea Tonsurans.—DR. A. F. HARRISON, of Bristol, in an article in the *British Medical Journal* for March 2, 1889, alludes to the unsatisfactory modes adopted in the treatment of that troublesome complaint, tinea tonsurans. Dr. Harrison states that the great difficulty of getting at ringworm of the scalp is physical; the parasitic fungus revels and runs rampant in the secure nidus of the hair and hair-follicle, a soil so congenial that it seems to be in some cases ever fertile and ever fertilizing. To overcome this difficulty, and so get at this secure fungus retreat, he indicated that no remedies could be considered highly efficacious which did not act chemically upon the hair matter itself and at the same time carry with them a parasiticide. Upon experimenting, Harrison found that caustic alkalies were most

useful hair-solvents, but did not destroy the conidia, and it was necessary to combine other agents with them. After a long series of careful investigations he found that the following ointment gave the best results :

R.—Caustic potash	grains jx.
Carbolic acid	" xxiv.
Lanolin	aa 3ss.—M.
Cocoanut oil	3ss.—M.

The ingredients should be well rubbed together, and, if desired, a little oil of cloves, lavender, or rosemary may be added.

When the disease occurs in a family he recommends those free from it to use the following prophylactic pomade :

R.—Boracic acid ointment	aa 3ij.
Eucalyptus ointment	3ss.
Oil of cloves	3ss.
Oil of cocoanut, q. s. to make	3ij.—M.

This preparation constitutes a most elegant pomade and entirely prevents inoculation. It should also be used on those parts of the patient's head where the disease has not reached.

In treating ringworm, Dr. Harrison does not advise the shaving of the head, but allows about a half-inch in length of the hair to remain. This, he says, gives a hold to the ointment. He prefers ointments to lotions, for the reason that ointments will be well rubbed in, while lotions will be but indifferently applied.

Treatment of Lupus.—DR. SCHÜTZ, in the *Therap. Monatsheft*, May, 1889, states that, having observed the beneficial effects of compression bandages in leg ulcers, he conceived the idea of applying a similar treatment in facial lupus where, after the latter has been scraped away, large granulating surfaces are left. His method is to apply a carbolized gutta-percha plaster containing mercury to the wound, and fixes it to its place with a thick coating of collodion. This plaster should be removed every six to twenty-four hours. The change of dressings should be performed as rapidly as possible, ether being used to dissolve the collodion. After the wound is fairly closed a plain dressing should only be applied for a few days; the cicatrix may then be rubbed down with powdered marble and soap and massage resorted to. The general health of the patient is also of great importance. A strong nutritious diet should be enforced; fresh air and gentle exercise also advised.

Antipyrin Hypodermically in Acute Articular Rheumatism.—A case of severe articular rheumatism, which, for seven weeks, had been treated by the remedies usually employed in such cases without avail, is reported by DR. H. AMON, in the *Centr. f. klin. Med.*, May 25, 1889, as having been completely cured by six-grain hypodermic injections of antipyrin. The remedy was subsequently employed in twenty other cases with equally gratifying results. Amon usually injected the drug deeply into the muscle and in the immediate vicinity of the affected joints; a bandage with considerable pressure was then applied. In one instance he observed a slight superficial gangrene of the skin to follow the injections. Very little pain was caused by their use.

Tape-worms in Children.—The following prescriptions will, according to the *Lyon Médical*, May 12, 1889, be found most effectual in cases of tapeworm occurring in children. Both are very agreeable to the taste, and are, therefore, easily administered:

I.	
R.—Oleoresin of aspidium	3j to 3ijss.
Peppermint water	f.3ss.
Essence of anise	gts. x.
Chamomile water	f.3j.
Syrup of sugar	f.3v.
Syrup of bitter orange-rind	f.3v.
II.	
R.—Oleoresin of aspidium	3j.
Calomel	6 grains.
Sugar	3ij.
Gelatine	q. s.

Make into the consistency of jelly, and administer as a confection.

Thuya in the Palliative Treatment of Epithelioma of the Larynx.—At the meeting of the Société de Médecine Pratique of Paris, held on May 3d, DR. BARATOUX reported the results of the treatment of a number of tumors of the nose, throat, and larynx, with tincture of thuya (Gr. P.). The remedy has formerly been used in the treatment of growths on the genitals, and even in epithelioma of the neck of the womb. In growths of the first-named organs, the tincture speedily remedied the fetid breath, lessened the discharge and even caused a marked decrease in the size of the tumor. It was used in twelve cases in all, with equally good results. In one case, where extirpation of the larynx was impossible, it undoubtedly prolonged life for two years.

DUJARDIN-BEAUMETZ said, in the same meeting, that the tincture of thuya was valuable in growths of the skin, such as warts. RELIQUET stated that the tincture in twenty to thirty-drop doses was most valuable in vesical tumors when surgical interference was impracticable. Tincture of thuya given internally is a popular remedy for warts among the people of Brittany.—*Deutsche med. Wochenschrift*, May 23, 1889.

Calomel and Digitalis in Ascites.—In cases of ascites following cirrhosis of the liver, in which there are no other complications apart from cardiac affections, DR. SCHWASS, in the *Centralbl. f. klin. Med.*, May 25, 1889, advises the use of calomel and digitalis in the following formula:

R.—Calomel	2 grains.
Digitalis	1/4 grain.—M.

The above dose every three hours for a week.

The diuretic action of this combination is far greater than that of either drug singly and can also be tolerated longer and better than either drug alone.

The New Analgesic Exalgine.—Still another compound of apparently considerable medicinal value (if we may trust the statements) has been obtained from one of the products of the destructive distillation of coal-tar. It has been experimented with by several members of the Academy of Medicine, who have reported favorably;

and in consequence of its marked analgesic properties it has received the name exalgine.

At the last meeting of the Société de Thérapeutique, M. BARDET presented samples of this substance and made his report.

Exalgine represents chemically, methylacetanilide, $C_6H_5NO = C_6H_5C_6H_3ONCH_3$. From acetanilide three methylic derivatives are obtained; one of these is the substance in question, and is designated by the name ortho-methylacetanilide. It presents itself in the form of fine needles or large white tablets, is little soluble in cold water, more soluble in warm water, and very soluble in spirit and water. Administered to animals (Paris) this substance acts energetically on the cerebro-spinal axis, and speedily kills in the dose of forty-six centigrammes per kilogramme of the weight of the animal. It causes restlessness and trembling, and the respiratory muscles soon become paralyzed. In a less dose all sensibility to pain disappears, and the temperature of the body diminishes gradually.

The physiological effects of exalgine are very similar to those of antipyrin, although the former seems to act in a more marked manner than antipyrin on the sensibility, and less energetically on the heat centres.

The analgesic effects of exalgine are obtained by a full dose of seven grains; in some instances it may be necessary to repeat this dose in a few hours. The relief from pain is more prompt and more lasting than when antipyrin is given; this is emphatically the case in all forms of neuralgia, especially in the visceral neuralgias. So far no symptoms of gastric or intestinal irritation have been noted when exalgine has been given for its medicinal effects; its use has never been attended by cutaneous eruptions or by cyanosis.

Exalgine is eliminated by the urine, the excretion of which it seems to lessen in diabetic polyuria, at the same time that it diminishes the quantity of sugar in the urine.—*Boston Med. and Surg. Journ.*, June 6, 1889.

Injections of Iodoform in Cold Abscesses.—DR. BARKER, in the *Journal de Médecine de Paris*, May 19, 1889, states that he had frequently used injections of iodoform emulsion in the treatment of cold abscesses with marked success. The formula used by him is as follows:

R.—Iodoform	10 parts.
Glycerine	70 "
Hot distilled water	20 " —M.

Grind up the iodoform with a few drops of alcohol and the glycerine, then add the water.

An Antiseptic Mouthwash.—DRS. GALIPPE and MALASEZ have found the following mouthwash most valuable as well as agreeable:

R.—Alcohol	370 parts.
Carbolic acid	10 "
Thymol	5 "
Oil of peppermint	15 "
Tincture of anise	100 " —M.

This mixture, which may be colored with a little tincture of cochineal, should be used every morning and evening in conjunction with a weak solution of boric acid.—*Deutsche med. Wochenschr.*, May 23, 1889.

THE MEDICAL NEWS.

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OF MEDICAL SCIENCE.

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SATURDAY, JUNE 29, 1889.

THE ASSOCIATION MEETING.

FOR the first time in a quarter of a century the American Medical Association has met in a New England State, and for the first time in its history in the State of Rhode Island. While the gathering was not large in comparison with those of recent years—probably not over six hundred members were in attendance—yet all parts of the country were represented. The beautiful town of Newport was in attractive garb, the weather was perfect, and the arrangements by the Committee for the comfort and convenience of the members in all matters pertaining to the meeting were admirable.

The President's Address was an interesting exposition of the share in the advancement of medical knowledge taken by the American profession. The progress of medical education in this country and the marked improvement, within the last few years especially, in our means and methods were indicated, and the influence of such factors as improved preliminary education, a broader curriculum, and a higher standard, the endowment of colleges and the equipment of laboratories, rendered possible by the accumulation of wealth, were clearly traced. Reviewing our periodical literature as the exponent of professional culture and advance, Dr. Dawson pointed out that our oldest journal, *The American Journal of the Medical Sciences*, with its British contemporary, the *Lancet*, had for over half a century exercised a marked

influence on medical progress, the value of which, he thought, could scarcely be overestimated. The Army Medical Museum and Library and our medical societies were also referred to as influential factors in professional culture. Turning, then, to the practical results, he cited anæsthesia, ovariotomy, and rapid lithotomy, with the operations devised by Sims, Sayre, Battey, and Emmet, as contributions to the relief of human suffering of which any nation might well be proud.

But Dr. Dawson did not confine himself to the roseate hue of medical progress; he strongly deprecated the provisions of some of the laws which have been passed of late years to regulate the practice of medicine, as conferring the seal of respectability upon any sham or pretender who held a diploma from any kind of college which might happen to possess a charter, and he took strong ground against the propriety of physicians sitting in State boards of health and the like with irregular practitioners.

In his peroration, Dr. Dawson made an eloquent plea for the maintenance of the National Association as a high and representative tribunal, the wisdom of whose decisions could always be relied upon, and to which all questions of general import can be referred.

One of the most remarkable evidences of the developmental growth of our profession is to be found in the large number of native works in every department of medicine which have emanated from the American press within the last two decades, which have almost completely supplanted the foreign text-books upon which we had heretofore depended. A reference to this Dr. Dawson might well have coupled with his allusion to the famous interrogatory of Sydney Smith, to which it is the reply. Not only is an edition of *The American Journal of the Medical Sciences* published in Great Britain simultaneously with its appearance in this country, but we constantly find in the London weeklies British book-sellers advertising American text-books, some of which have been so highly esteemed as, also, to be translated into the principal foreign languages.

The Address in Medicine was a study of Benjamin Rush, as physician, philanthropist, and patriot, with a comparison of the therapeutic practice of his day with that which prevailed a century earlier in the time of Sydenham. The subject was aptly chosen, and by forcibly directing attention to the life and character of the greatest of American physicians, Dr.

Pepper ably furthered the efforts of the Association's Rush Monument Committee, of which Dr. Gihon, of the Navy, is chairman. The project for this monument was started at the meeting in Washington, in 1884, and, notwithstanding that the financial exhibit is now no more encouraging than that of many funds for similar purposes, yet it is confidently hoped that a sufficient sum may soon be subscribed to erect a memorial worthy of so distinguished a man. Public monuments have already been erected to all the great actors in the Revolution save Rush, a signer of the Declaration and a prominent and vigorous figure in the stirring events which followed and led up to the establishment of our national independence. Inasmuch as he was also America's greatest physician, it is eminently fitting that in these days of centennial reminiscences the medical profession should, to the honor of its own guild, erect at the Nation's capital a fitting monument to the memory of Rush.

The Address in Surgery made reference to some of the more important recent advances in this field of research, particularly to antisepsism, the surgery of the abdomen, brain and spine, tuberculosis, and cancer. While strongly endorsing the antiseptic method, and pointing out that the brilliant results of abdominal surgery have only been rendered possible by asepsism, Dr. Conner protested against that enthusiasm which sees in failure to obtain speedy recovery after injury or operation, evidence of "criminal neglect."

In reference to the two most fatal diseases, tuberculosis and cancer, he pointed out that while the recent discoveries in reference to tuberculosis had enlarged our knowledge of its surgical manifestations, and modified our treatment, in regard to cancer we still knew very little. We are aware of the importance of its early recognition and speedy removal, and of the uselessness, so far as ultimate recovery is concerned, of surgical interference after wide extension of the disease, but of its etiology we are still in ignorance. He concluded with the very practical recommendation that the Association should undertake a collective investigation to ascertain the frequency of carcinoma, its relation, if any, to geological formation; the age of appearance; the relative affection of parts; the influence of treatment; and the duration of life with and without operation. The Association could undertake no more useful investigation, and we hope that in a few

years we may see fruitful results from this feasible and good suggestion.

The selection of Dr. E. M. Moore, of Rochester, for the presidency will be regarded throughout the country with universal satisfaction both for his personal worth and in recognition of his valuable contributions to practical surgery. It is the crowning honor of a long career devoted to the furtherance of the best interests of the profession and to the material advancement of surgical knowledge.

Nashville as the place of meeting has the merit of being central and accessible from all directions.

The attendance at this year's meeting was, without doubt, sensibly diminished by the limited accommodations afforded by the Newport hotels, and by the failure to secure the usual reduction in transportation rates. This, we are informed, was due not to any lack of courtesy on the part of the principal trunk lines, but entirely to the unwillingness of the Old Colony Railroad, which controls about all the approaches to Newport, to make any reduction until the last moment, when it was too late to notify the members and render the concession available. The largest meetings, too, experience has shown, have been held in the large cities on the main lines of travel, which have widely extended medical interests as well as the other substantial attractions that always insure a good attendance. The Newport meeting demonstrates that even an unusually good programme of scientific work will not fully counterbalance these more material advantages. Yet the meeting of 1889 will always be remembered as an extremely pleasant gathering, at which much excellent scientific work was accomplished.

EXCESSIVE GROWTH OF THE PROFESSION.

A LEADING article in the *Lancet* recently remarks upon the newly issued *Medical Register of Great Britain* for 1889, with somewhat gloomy forecast concerning the excessive growth of the medical profession during recent years. The editor holds that there is too great a rush into the profession on the part of young men. The new admissions to the *Register* in 1888 were 1184, while the known losses by death, retirement, and other causes were less than 600—the number of reported deaths being 511—giving an influx of qualified practitioners of about 600; the students' registration at the same time

amounting to 1986, or about 1400 over and above all losses. But of this invading column of 1986 would-be practitioners, about one-third, the figures of recent years show, will fall, by the way before the end of the five years' study will have been reached. The *Lancet* expresses sorrow for the student and regret for the profession that so abnormal an increase of the ranks is annually threatened; apparently, its ideal of the growth of the fraternity would be one which would just about even up the losses that are sustained by death and disability.

But if the trans-Atlantic position be thus deplorable, what comfort is there in a contemplation of the situation in our own country? Here we have already a proportionate supply of doctors amounting to 120 to every 100,000 inhabitants, while in England there are only 64 in 100,000, and in Great Britain at large, a still less proportion. And the annual increment of medical graduates in this country is fully treble that of Great Britain; a recent summary of the Illinois State Board of Health states that 3,219 regular physicians were sent forth from the ninety-one schools of the better class during the session of 1887-8, and nearly 600 others non-regular. The output of the current year promises to be an ample one, to say the least; in four recent numbers of *THE News*, the quota of graduates from twenty-four colleges east of the Rocky Mountains has been published, amounting to not less than 1,534, with forty or more regular institutions yet to be heard from. If the British outlook can be considered gloomy, how cheerless is the situation in this land of almost unrestricted production!

WE learn from the *Berliner klinische Wochenschrift* of June 3d, that the arrangements for the International Medical Congress in Berlin next year have been confided to Professors Virchow, von Bergmann, and Waldeyer. These gentlemen purpose not only to obtain the active coöperation of the profession of Berlin, but also of the whole of Germany. Invitations have already been extended to all German medical societies. The Congress will probably be opened on August 6, 1890.

DR. RICHARD J. HALL, Professor of Anatomy in the College of Physicians and Surgeons, New York, has resigned his chair by reason of ill-health. His successor to the professorship has not been elected, but Dr. George S. Huntington has been appointed

to deliver the lectures in that branch at the session of 1889-90.

THE next meeting of the American Dermatological Association will be held at Boston, on Tuesday, Wednesday, and Thursday, September 17, 18, and 19, 1889.

By the will of the late Stanton Blake, of Boston, the Massachusetts General Hospital receives a donation of \$10,000. The work of the Hospital will be further amplified by an Act of the late Legislature, which sets apart the sum of \$55,000 for the erection of an overflow hospital for epileptics at Baldwinsville.

DR. C. E. SIMMONS, who is suing the estate of the late Samuel J. Tilden for \$143,350 for medical advice, figures up the sum, according to the *Boston Medical and Surgical Journal*, by charging \$50 a visit for 2200 visits, and \$50 a day for holding himself in readiness to devote his exclusive attention to Mr. Tilden.

The Lancet, of June 1st, says that according to intelligence received from the Governor of Madras, between one thousand and fifteen hundred deaths from cholera are now taking place weekly.

SOCIETY PROCEEDINGS.

AMERICAN MEDICAL ASSOCIATION.

Fortieth Annual Meeting, held at Newport, R. I., June 25, 26, 27, and 28, 1889.

(Specially reported for *THE MEDICAL NEWS*.)

(By Telegraph.)

GENERAL SESSION.

TUESDAY, JUNE 25TH.—FIRST DAY.

The General Session was called to order by Dr. H. R. Storer, of Newport, Chairman of the Committee of Arrangements, at 11.30 A.M., in the Music Hall, and the President, W. W. Dawson, M.D., of Cincinnati, took the chair.

The Rev. Thatcher Thayer then made the opening prayer.

The President extended an invitation to the ex-presidents of the Association and to all foreign visitors to occupy seats on the platform. This was responded to by Drs. N. S. Davis, J. M. Toner, and Wm. Brodie, ex-presidents.

Dr. Storer announced the death of Dr. F. H. Rehwinkel, of Chillicothe, O., Chairman of the Section of Dentistry, and of Dr. J. B. Hunter, of New York, who had promised to contribute a paper in the Section on Obstetrics.

Dr. Rives announced that letters of regret at being

unable to be present had been received from the President of the United States and his Cabinet; Sir James Grant and Sir Charles Tupper, of Canada; Dr. E. H. Gregory, of St. Louis, and Dr. H. I. Bowditch, ex-presidents of the Association.

Invitations were received from the commanding officer of Fort Adams, to witness a drill of the Light Battery; from Commander Higgins, of the Navy, in charge of the U. S. Training School; from Commander Woodward, of the U. S. Torpedo Station; from the Newport Hospital; from the Redwood Library; the Rev. Rabbi Mendez, of the Jewish Synagogue, the oldest in the State; from the Assistant Superintendent of the Third U. S. Life-saving District—each extending cordial welcome to all who desire to visit the various places of interest in their charge. Other entertainments were also announced by card.

Dr. Storer stated that he had placed on exhibition his collection of medical medals at the rooms of the Historical Society.

A letter of welcome was received from the Dean of Harvard Medical College to all who desired to visit that institution.

In view of the failure of the Committee of Arrangements to secure reduced railroad rates, Dr. Storer advised the Association hereafter to make it a duty of the Permanent Secretary to secure travelling facilities for the Association, or otherwise to retain some special officer for that purpose, suggesting the name of Dr. L. H. Mongomery, of Chicago.

On motion of Dr. J. C. Culbertson, of Cincinnati, the matter was referred for consideration to a committee of three to report to-morrow.

THE ADDRESS OF WELCOME

was then delivered by His Excellency, Herbert W. Ladd, Governor of Rhode Island.

Dr. James H. Eldredge read a greeting on behalf of the State Medical Society, of which he is one of the oldest members. In it he urged the admission into the Association of all physicians without regard to sex or school of practice.

THE PRESIDENT'S ADDRESS

was then read (see page 701).

The Session then adjourned.

WEDNESDAY, JUNE 26TH.—SECOND DAY.

The Association was called to order by the President at 10.30 A.M.

Rt. Rev. Thomas M. Clark, Bishop of Rhode Island, made the opening prayer.

Dr. Storer announced the several entertainments of the day, and repeated the invitations given the day previous.

The President announced the names of Dr. J. C. Culbertson, Dr. Schenck, and Dr. J. H. Musser as members of the Committee on Transportation.

The Permanent Secretary then announced the

NOMINATING COMMITTEE,

as follows :

Arkansas.—P. O. Hooper.

Colorado.—J. W. Graham.

Connecticut.—C. H. Bill.

District of Columbia.—D. W. C. Patterson.

Georgia.—J. B. S. Holmes.

Illinois.—J. S. Marshall.

Indiana.—G. J. Cook.

Iowa.—W. F. Peck.

Kansas.—J. E. Minney.

Kentucky.—J. M. Matthews.

Louisiana.—J. J. Bland.

Maine.—Frank Hitchcock.

Maryland.—John Morris.

Massachusetts.—J. N. Warren.

Michigan.—W. Brodie.

Missouri.—I. N. Love.

Minnesota.—J. H. Murphy.

Nebraska.—Carter.

New Jersey.—B. A. Watson.

New York.—E. D. Ferguson.

New Hampshire.—Hill.

Ohio.—W. S. Christopher.

Pennsylvania.—W. H. Parish.

Rhode Island.—George S. Collins.

Tennessee.—E. C. Savage.

Texas.—Van Gasken.

Vermont.—H. D. Holton.

West Virginia.—A. S. Stephen.

Virginia.—W. S. Robinson.

Wisconsin.—W. P. Galloway.

United States Army.—Major Smart.

United States Navy.—John L. Nielson.

United States Marine Hospital Service.—W. H. Long.

Utah.—W. Bascom.

New Mexico.—W. H. Ashby.

DR. WILLIAM PEPPER, of Philadelphia, now delivered

THE ADDRESS IN GENERAL MEDICINE.

It consisted almost wholly of a biographical sketch of Dr. Benjamin Rush. He spoke at length on his general good qualities as a man and patriot as well as a doctor, of his opposition to slavery, his support of and assistance to Franklin in the Revolutionary period and the formation of the government, his opposition to the abuse of alcoholic liquors, to the use of tobacco, his leadership in works of practical value, his standing as a literary man of the highest type, his advocacy of the advanced education of women, of public schools, etc. In every way Dr. Rush was a pioneer in the field of medical practice, and the history of American medicine practically begins with and was for a time the history of Dr. Rush.

DR. A. L. GHON, of the Navy, then read his report of the

RUSH MONUMENT COMMITTEE.

The Committee regretted that they were unable to report progress. Indeed, they doubted if the project would be completed within their expectancy of human life. They called attention to the fact that the founders and leaders of every other profession and calling have been honored by fitting monuments and tributes. We join in hurrahing for the names of generals, politicians, etc., but forget the illustrious members of our own profession. It was believed a few years ago that the bare mention of the project would call forth spontaneous contributions of not less than one dollar from each of the forty thousand members of our profession. But the treasurer of the Committee now reports the receipt in

five years of only the first thousand. It is true that other great monuments have met with slow contributions. But of late there have been notable exceptions. In conclusion, the Committee begged to resign to the Association their appointment, in the hope that some other members may be found who shall discover some shorter way of securing the funds. They entreated the Society, however, never to abandon the project.

DR. HERRON moved that one member from each county society be appointed for the purpose of personally soliciting contributions to the Rush Monument fund. The motion was carried, as was also a motion that subscriptions be received immediately.

DR. GARCELON, of Maine, moved that the consideration of

AMENDMENTS TO THE CONSTITUTION

be made the first order of business tomorrow morning. The motion was lost.

The Secretary then read as the first amendment offered to "Strike out the last clause or paragraph of Section 7, relating to individually affixing names to the Constitution and regulations of this Association."

DR. N. S. DAVIS then read paragraph seven, explaining the intention of the proposed amendment. The amendment was unanimously adopted.

DR. SCOTT, of Ohio, moved that further action on the amendments be deferred until next year, in order to permit the Secretary to present the matter in an intelligible form.

DR. J. C. CULBERTSON moved that the preparation of the printed amendments be referred to the Board of Trustees of the *Journal*.

By unanimous vote the motion of Dr. Scott was tabled.

The SECRETARY then read as the second amendment offered that proposed by Dr. H. N. Moyer, of Ill., viz.:

"There shall be created a Section of Pharmacy and *Materia Medica* which shall have its own autonomy in like manner as the Section in Dental and Oral Surgery. Reputable members of State Pharmaceutical Associations shall be eligible as members of the same on presentation of credentials from their State Secretary, but shall have no voice in the general sessions of the Association. The Section of Surgery shall hereafter be denominated the Section of Surgery and Gynecology. There shall be created a Section of Anatomy and Physiology. The Section of Obstetrics and Diseases of Women shall be abolished. The Section of Diseases of Children shall hereafter be denominated the Section of Obstetrics and Paediatrics. The Section of Dermatology and Syphilography shall hereafter be denominated the Section of Dermatology and Genito-urinary Diseases. The Section of Medical Jurisprudence shall hereafter be denominated the Section of Mental and Nervous Diseases. The Section of State Medicine shall hereafter be denominated the Section of State Medicine and Medical Jurisprudence. The Section of Practice of Medicine, *Materia Medica*, and Physiology shall hereafter be denominated the Section of Internal Medicine."

DR. N. S. DAVIS opposed the amendment as an effort to rehash all that has been done in the formation of Sections. He moved to postpone indefinitely all but the first paragraph.

DR. HERRON moved to amend the motion so as to postpone the entire amendment.

The entire matter was tabled by a vote of ninety-two to eight. A motion of Dr. Early, of Pennsylvania, to reconsider was unanimously laid on the table.

The Secretary then read the following amendment to Section V of the Constitution:

"The General Committee or Council shall be composed of *two members* from each State and Territorial Medical Society entitled to representation by delegates in the Association, and from the Medical Departments of the U. S. Army, Navy, and Marine-Hospital Service. They shall be chosen by the members registered and present at each annual meeting, from each State, Territory, and from the Medical Corps of the U. S. Army, Navy, and Marine-Hospital Service, acting separately, on the third day of each annual meeting; each delegation reporting the names of the members chosen to the Permanent Secretary of the Association on the same day, that they may be announced by him at the opening of the morning session of the fourth day. At the first election each delegation shall choose *two members* of the General Committee, one of whom shall serve *one year* and the other *two years*, and at each annual election thereafter one member shall be chosen to serve for two years, thus making the term of office of members of the General Committee *two years*. It shall be the duty of the General Committee, thus constituted, to organize by choosing annually a Chairman and Secretary, and such sub-committees as may be found necessary to facilitate the work that may be assigned to it; to meet annually at the place and on the day preceding each annual meeting, all the general officers of the Association (none of whom shall be members of its own body), the members of the Committee of Arrangements, the Committee on Necrology, seven members of the Judicial Council, and three members of the Board of Trustees for Publication for election by the Association; to recommend the place and time of holding the next annual meeting; and to consider and report upon all subjects that may be referred to it by vote of the Association. The presence of one-third of the whole number of members elected to the General Committee shall constitute a quorum for the transaction of business. If, at any annual meeting of the Association, it shall be found at the close of the general meeting of the first day that a quorum of the General Committee is not present, it shall be the duty of the President and Permanent Secretary to fill the vacancies in the Committee temporarily by selections from the lists of delegates registered as present from the States to which the vacancies belong."

Should this provision be adopted by the Association the Permanent Secretary should be authorized to substitute the name "General Committee" for "Nominating Committee" wherever the latter occurs in other parts of the Constitution and By-laws.

DR. EARLY moved that the consideration of the entire amendment be indefinitely postponed. The motion was lost by a vote of 24 to 48.

DR. N. S. DAVIS explained at length the intention of the amendment, at the same time giving the origin of it, and the necessity for such a change in the method of transacting the business of the Association.

The proposed amendment was strongly opposed by Drs. Larrabee, of Kentucky, Murdock, of Pennsylvania, Scott, of Ohio, Marshall, of Pennsylvania, and others; it was defended by Drs. Leartus Connor, of Michigan,

I. N. Quimby, of New Jersey, Jackson, of Pennsylvania. The amendment was lost.

DR. J. M. TONER reported that the sum collected at this meeting for the

RUSH MONUMENT COMMITTEE

was \$264.50.

A resolution referred from the Section of State Medicine was then read, to the effect that it is the duty of the United States and every other country to take measures for the removal of sources of infection within its borders.

THURSDAY, JUNE 27TH.—THIRD DAY.

The Association was called to order at ten o'clock by the President. Ex-presidents and foreign visitors were invited to seats on the platform, and Sir James Grant, of Ottawa, in a few remarks, acknowledged the courtesy.

DR. P. O. HOOPER, of Arkansas, presented the

REPORT OF THE TRUSTEES OF THE JOURNAL.

It gave a history of the six years of publication; stated that the finances of the Association had tripled, and that the *Journal* was the equal of the best in the country. The Editor's report showed that the weekly circulation was 4633 copies, out of which 4339 went to members of the Association. The total present edition was now 5000 copies weekly, and the year closed with the *Journal* free from debt. The report was accepted.

MEDICAL EDUCATION.

A resolution was presented from the American Social Science Association asking that a committee of three be appointed to consider the importance of a more thorough education of physicians for entering upon their medical studies, and of a more thorough regulation of the medical curriculum and of the placing of medical colleges under State supervision.

DR. P. S. CONNER then delivered

THE ADDRESS IN SURGERY.

(See page 708.)

THE TREASURER'S REPORT

showed a balance of \$973.35, and the Auditing Committee reported that the accounts were correct.

THE REPORT OF THE NOMINATING COMMITTEE

was presented, as follows:

President.—E. M. Moore, of Rochester, N. Y.

Vice-Presidents.—J. W. Jackson, of Missouri; W. W. Kemble, of Minnesota; J. H. Warren, of Massachusetts; T. B. Evans, of Maryland.

Permanent Secretary.—Wm. B. Atkinson, of Philadelphia.

Treasurer.—R. J. Dunglison, of Philadelphia.

Librarian.—C. H. A. Kleinschmidt, of Washington, D. C.

Judicial Council.—N. S. Davis, of Chicago; J. H. Brown, of Kentucky; Wm. Brodie, of Michigan; R. C. Moore, of Nebraska; —— Gillespie, of Tennessee; T. A. Forster, of Maine; J. B. S. Holmes, of Georgia.

Trustees of the Journal.—T. O. Hooper, of Arkansas; Alonzo Garcelon, of Maine; I. N. Love, of St. Louis; W. W. Dawson, of Cincinnati.

Address in Medicine.—N. S. Davis, of Illinois.

Address in Surgery.—Hunter McGuire, of Richmond.

Address in State Medicine.—A. L. Carroll, of New York.

Committee to fill vacancies in the appointments to deliver General Addresses: Drs. William Brodie, J. H. Murphy, and I. G. Morris.

Place of next meeting. Nashville; *Time,* the third Tuesday in May.

Chairman of the Committee of Arrangements. W. T. Briggs, of Nashville.

Assistant Secretary. G. C. Savage, of Nashville.

The report was accepted and the nominees duly elected.

DR. J. C. CULBERTSON, from the Committee appointed to consider the question of

REDUCED RATES FOR TRANSPORTATION,

recommended that it shall be the duty of the Permanent Secretary to secure from railroads, steamboats, and other passenger traffic associations the lowest possible rates of fare to the place of meeting. After debate the resolution was adopted.

DR. WOODBURY, of Philadelphia, offered a resolution recommending the

ALTERATION OF THE PATENT LAWS,

so as to prevent discrimination in favor of foreign manufacturers of drugs. Adopted.

The Ophthalmological Section presented a resolution asking the Census Authorities to tabulate the

STATISTICS OF THE BLIND,

with the cause of blindness, so far as possible. Adopted.

The Section on State Medicine recommended the adoption of a resolution asking for

UNIFORMITY IN STATE MEDICAL LEGISLATION;

that a thorough preliminary examination, three courses of lectures, and an examination by the Board issuing a license be required. The license to practise be recorded in the office of the County Clerk, and that the Licensing Board be endowed with power to revoke a license on account of immoral conduct. Adopted.

The same Section also recommended that the Committee on Collective Investigation of Disease be discharged and that the Committee on Meteorology be continued with instructions to report to the Section on State Medicine at the next annual meeting.

DR. WOODBURY, of Philadelphia, moved that the members of the American Pharmaceutical Association be invited to seats on the platform, and that a committee be appointed to confer with the Association in reference to the creation of a Section of Pharmacy and *Materia Medica* in this Association, and to report on the second day of the next annual meeting.

The Committee on Dietetics reported progress and asked to be continued.

AMENDMENT TO THE CONSTITUTION.

DR. A. L. GIHON, of the U. S. Navy, presented an announcement changing the time of meeting from the first Tuesday to the first Wednesday in May or June.

THE PRESIDENT then introduced Sir James Grant, of Ottawa, who thanked the Association for its cordial welcome and kind treatment, and he expressed surprise and admiration at the vast amount of valuable work now being done in Medicine.

The Session then adjourned.

SECTIONS.

TUESDAY, JUNE 25TH.

SECTION OF MEDICINE.

DR. FREDERICK C. SHATTUCK, of Boston, Chairman.

THE CHAIRMAN, DR. SHATTUCK, opened the session with the following

INTRODUCTORY ADDRESS.

In obedience to the rule of the Association that the Chairman of each Section shall review the progress which the year has brought in those subjects which immediately concern his Section, he asked attention to a very brief consideration of a few of the large number of topics which might worthily find notice here.

The practice of medicine, *materia medica*, and physiology includes so much, the workers are so many, and the fruits of their labors are so varied and abundant that the difficulty of selection is itself an embarrassment.

The grass had scarcely grown on the grave of the treatment of pulmonary tuberculosis by gaseous enemas before another curative method was advocated by Weigert,¹ Halter,² and Krull,³ a method which would seem at first sight to have claims to be called curative in that it is designed to remove the cause of the disease by destroying the bacilli *in situ*. We know that the development of this particular microbe is arrested at a temperature of 107° F.; and if, then, the intra-pulmonary temperature can be raised to or above this point and there maintained for a time the happiest results must follow. He confirmed the statements of the originators of this method as to the ability of patients to breathe with impunity air at a surprisingly high temperature. He, himself, had inhaled it at 320° F., and seen patients inhale it at 428° F. without notable inconvenience. Nearly six months ago, Dr. G. G. Sears, of Boston, began to practise inhalations of hot air on some patients in the House of the Good Samaritan. His results are now ready for publication, and it will suffice to say here that an apparatus was used devised by Mr. G. L. Kingsley of the Harvard Medical School, an apparatus which can be made by any coppersmith for \$5—that patented by Weigert costs in this country \$75—and that they are satisfied that the problem of intra-pulmonary direct germicidal action is still unsolved.

The pancreas, an organ the diseases of which have been until recently of pathological rather than clinical interest, is being dragged from obscurity. Senn's work on cysts of the pancreas is followed up by Fitz,⁴ who has collected seventy cases of the several forms of acute inflammation of the organ, and subjected them to a rigid analysis which yields a notable increase to our knowledge. A frequent cause of acute pancreatitis seems to be the extension of an inflammation from the duodenum into the pancreatic duct and thence to the interstitial tissue of the organ; which tissue stands in such relation to the peritoneum, the retroperitoneal and retropancreatic fat tissues, as to permit the ready passage of bacteria, and thus account for the peritonitis and

disseminated fat-necrosis so often resulting from pancreatic inflammation. Inflammation of this organ is doubtless much more common than has hitherto been generally supposed, and is not impossible of diagnosis. The affections with which it is most likely to be confounded, are irritant poisoning, perforating gastric or duodenal ulcer, perforation from gall-stones, and acute intestinal obstruction. The first three can be excluded by the history of the case, and the associated symptoms; the last by determining the patency of the large intestine through injection, by the seat of the pain and tenderness in the upper abdomen, and by the absence of marked tympanites. He trusted that he would be pardoned here for bringing in his own personal experience, which he did with the less hesitation, inasmuch as it is not especially to his credit. It was his lot during the past winter, to be one of six physicians and surgeons at a consultation; four of them considered the case as probably acute intestinal obstruction, one inclined to perforation, while Dr. Fitz alone held that it was acute pancreatitis, and advised against operation. Laparotomy was done, no obstruction was found, multiple fat-necrosis was seen in the omentum, and the autopsy revealed acute hemorrhagic pancreatitis.

Frerichs long ago noticed the frequency of atrophy of the pancreas in diabetes mellitus; and Lancereaux in a recent and important paper calls attention to the relation between these conditions, based on twenty cases which he has seen, with post-mortem verification in fourteen of these. Pancreatic diabetes, in contra-distinction from the other forms of the affection, is characterized by sudden onset, rapid course, and severity of symptoms with great emaciation. In two of the cases, by the way, epigastric colic led to the diagnosis of pancreatic calculus, and the autopsies brought justification.

He alluded to the experiments of Pavloff and Smirnoff, which show that in rabbits whose pancreatic ducts have been ligated, regeneration of the gland may take place after a new and spontaneous communication with the intestine has been formed.

The much-vexed question as to the nature of diabetic coma, with the indications for the liability of its occurrence in any particular case, and the means for its relief, are ably considered by Kirsstein,² who details the steps through which our present knowledge has been attained. In certain cases of diabetes the organism seems to have lost the power of burning the fatty acids, largely β oxy-butyric acid, to their normal end-products. These cases are characterized by a large increase in the amount of ammonia in the urine, rather than by any striking symptoms or complex of symptoms, and these are the cases in which coma is to be dreaded; this form of coma being the result of the formation of larger amounts of free acids than can be neutralized by the ammonia which the organism is capable of supplying, the consequent abstraction from the blood of the fixed alkalies, and thus toxæmia.

The quantitative estimation of ammonia in the urine of diabetics is, consequently, of great importance therapeutically as well as for prognosis; but, unfortunately, a method for this estimation, readily applicable to clinical purposes, is still lacking. When this large excess of

¹ Med. Record, 1888, ii. p. 693.

² Berl. klin. Wochenschrift, 1888, Nos. 36-38.

³ Berl. klin. Wochenschrift, 1888, No. 39.

⁴ The Middleton Goldsmith Lecture for 1888. Boston Med. and Surg. Journal, 1889, pp. 181, 205, 229.

¹ Lancet, 1889, i. p. 999.

² Deutsch med. Wochenschrift, April 11, 1889.

ammonia is found, the indications are to restrict the acid rather than the sugar-forming foods—meats, for instance—and to give alkalies freely. On the advent of the peculiar dyspnea, which is apt to be the first symptom of coma, alkaline intravenous injection is to be practised, as has already been done in a small number of cases, Minkowski alone having saved his patient.

The diseases of the blood have been studied by Graeber, Hunter, and others. According to Graeber,¹ anaemia, chlorosis, and pernicious anaemia are distinguishable from one another by a count of the red corpuscles and an haemoglobin estimation. Hunter² argues to show that pernicious anaemia is an entity, pathological and clinical; depends on increased blood destruction, probably in the liver; and is to be differentiated from all grave anaemias, as, for instance, those of cancer and intestinal parasites, as well as from all other primary anaemias, by the greatly increased amount of blood-pigment, responding to the micro-chemical tests for iron, found in the liver in this affection. The spleen contains no such excess of iron as does the liver, and, in the latter organ, the seat of the pigment is chiefly the outer portions and cells of the lobules, not the capillaries, a fact which goes to show that the blood destruction takes place in the liver itself, the pigment entering the cells in soluble form—haemoglobin—and there undergoing conversion into albuminate of iron. In all cases where the blood destruction takes place elsewhere than in the liver, and pigment is deposited in that organ, it accumulates in and about the capillaries.

A paper of MacMunn,³ of Wolverhampton, on "Addison's Disease," is noteworthy. He has studied the adrenals and urine of patients with this disease, spectroscopically; and, reviewing our knowledge of the subject, concludes that the function of the adrenal bodies is the removal from the circulation of worn-out pigments and their accompanying proteids. "When the adrenals are diseased these effete pigments and effete proteids circulate in the blood; the former, or their incomplete metabolites, producing pigmentation of the skin and mucous membrane, and appearing often in the urine as urohaematoxophyrin; the latter producing toxic effects and leading to further deterioration of the blood with its consequences."

At the meeting in Cincinnati last year, a discussion took place on the modern methods of diagnosis in diseases of the stomach; and high hopes were expressed that by the examination of the gastric contents an ease and certainty of diagnosis in these affections were almost within our reach comparable to that which urinary analysis yields in renal diseases. The more carefully the question is studied the greater is the demand for yet further study, and the more clearly does the necessity appear for the exercise of great caution in the formation of definite conclusions at present. In the first place, it is now seen that the only single test for free hydrochloric acid which has a real clinical value, is the phloroglucin-vanillin; the tropaeolin, congo-red, methyl-violet, and other tests, either reacting to other acids or acid salts, or being often prevented from reacting by albuminoids,

even when free hydrochloric acid is present. Secondly, it gradually appears that it is not safe to base a diagnosis of gastric cancer or even the persistent absence of this acid from the gastric contents withdrawn an hour after a test meal. Such absence is indicative of notable impairment of the functional activity of the mucous membrane, as from a severe catarrhal condition; or of extensive destruction of the secretory glands of the stomach, largely irrespective of the cause of the destruction. Thus, in a case of cancer sharply localized and unaccompanied by catarrh to any marked degree, free hydrochloric acid may be found in sufficient amount until the cachexia is well advanced. On the other hand, in severe but simple catarrh, especially if attended by the formation of much mucus; in atrophy of the gastric tubules; in amyloid disease of the organ; after strong caustics have done their work; even in certain cases of impaired innervation; no free hydrochloric acid may be detected, though sought for repeatedly with the utmost skill, and the aid of every appliance and reagent.

It also appears that hyperacidity, though a frequent, is by no means a constant, accompaniment of peptic ulcer. Indeed, it is impressed upon us that the pathology of an organ which varies so widely physiologically in the same individual within such short periods of time is a very complicated thing, and the lesson is again enforced that it is not in pathognomonic signs, but in careful weighing of each piece of evidence, and in the painstaking collocation of them all, that accurate diagnosis is to be attained.

During the past year the internal antipyretics have continued to seek their level. It is seen that they exert no curative influence on specific febrile processes; and, as we recognize more and more clearly that even continued fever is not productive of the changes in the parenchymatous organ with which we credited it of late years, but that the danger of these processes lies rather in the effects of toxic alkaloids on the nervous centres than in temperature elevation, as we recognize this fact, we appreciate how irrational it is to address our therapeutics chiefly to pyrexia. When the fever is in itself productive of discomfort to the patient, internal antipyretics are useful; but the indications seem to me, at least, strong that the antineuritic and analgesic will survive the antipyretic application of this class of drugs.

On the other hand, it seems probable that the cold bath treatment of continued, and especially of typhoid fever, must be adopted and conscientiously carried out in this country. As the principles of Brand's methods gain headway in France, a country not prejudiced in favor of German leadership; as Brand's results are confirmed by other observers and in other countries; and in the face of such statistics as are put into our language by H. C. Wood,¹ Wilson,² and Baruch,³ it is difficult to see how a people who pride themselves on wealth, general intelligence, and practical qualities, can be longer deterred by scepticism, or motives of convenience and economy, from the adoption of a method of treatment which reduces the mortality of typhoid fever to three per cent.

The hypnotics sulphonal and amylene hydrate have come into more general use, and prove themselves to be

¹ Fortschritte der Medicin, July 15, 1888.

² Practitioner, August, 1888, and Lancet, 1888, September 22 and 29, October 6.

³ British Med. Journal, February 4, 1888.

¹ Therapeutics; its Principles and Practice, 7th ed., 1888, p. 58 *et seq.*

² Annual of the Med. Sciences, 1889, vol. i.

³ New York Medical Record, 1889, vol. i. p. 434.

valuable additions to our list of remedies of this class. Unpleasant effects seem rare, while the slow absorption of the one and the rapid action of the other give each a place.

The treatment of locomotor ataxia by suspension (accidentally hit upon by Motchoukovsky, of Odessa, who was struck by the benefit derived by a tabetic patient, also suffering from spinal curvature, after the suspension required in applying a plaster jacket) has spread with great rapidity, and is being thoroughly tested in this, as well as in other countries. It is still too early to determine how useful it will prove to an unfortunate class of patients.

Morton Prince¹ was led by his duties as examiner of applicants for the Boston Fire Department, and by the frequency with which he heard temporary murmurs in vigorous men, to a study of their mode of origin. It has been believed for some years that in debilitated states leakage may take place through the mitral valve, the curtains of which are not tightly closed by reason of the insufficient force of the ventricular contraction. It will be at once appreciated that Prince's cases were the reverse of debilitated; and his ingenious explanation of the murmur heard in them is that, under conditions of great excitement, such as many of the applicants presented, the valve may be forced by ventricular contractions of a power disproportionate to the resistance of the valve. It is not easy to detect a flaw in his argument, and it seems as if he had made an important addition to our knowledge.

To sum up the results of the year, it may be stated that it has been one of real, though not of brilliant progress. Knowledge has been advanced almost all along the line, more in some parts than in others; bacteriology in its broad sense, including the chemical poisons generated by or accompanying the microbes as well as the identification and life-history of the organisms, offering an enormous field for patient research.

One fact seems to stand out in strong relief; namely, that our countrymen are on the high road leading to the attainment of a reputation for scientific research equal to that which they have long enjoyed in the more immediately practical branches of medicine and surgery.

The future glows with a promise which the achievements of the past assure us will be realized; and it is the part of each one of us, if he cannot discover, at least to do all that in him lies, to make the highest and best use of the discoveries of others more gifted than himself.

DR. CHARLES G. STOCKTON, of Buffalo, N. Y., then read a paper entitled

ON THE PASSAGE OF PORTAL BLOOD INTO THE GENERAL CIRCULATION, AND ITS PROBABLE RELATION TO TOXÆMIA.

The claim was made, first, that anastomoses between the portal and the general systemic veins occur normally to a certain extent in all mammals; that as anomalous conditions these intercommunications may be extensive; that as a result of obstructive liver disease, or peri-hepatitis, new anastomoses may be set up. Next, it is claimed that the blood of the portal vein is toxic, at times extremely so. And it is held that toxæmia is pre-

vented, in ordinary conditions, by reason of the lower blood pressure in the portal than in the general venous circulation.

When the portal circle is obstructed, portal blood enters the systemic veins without filtering through the liver, thus inducing toxæmia.

This would prove more disastrous than it does, but for the action of the blood upon the substances which are carried into the circulation. The blood having the property, when in health, of purifying itself to a certain extent, serious toxæmia does not often follow until the integrity—resistance—of the blood is diminished by long effort, or by disease; and then toxicity is made evident by symptoms.

In this connection reference is made to the coma of cirrhosis, to propepturia, glycosuria, and certain cachexiae. The low pressure in the portal vein is proved by experiments of Prof. Julius Pohlman upon the lower animals.

DR. OSLER, of Baltimore, thought that the point referred to by Dr. Stockton is one of serious import. He was not sure, however, but that it is only partially true. He doubted whether the question thus received its solution. He believed that the collateral circulation is a constancy. This must meet the blocking up of the channels. The same condition obtains as in narrowing of a valve of the heart. Every one has found in post-mortem examinations extreme cirrhosis of the liver without a single symptom during life, and yet in such instances a great proportion of the portal blood passed into the general circulation. Furthermore, in cases of fibroid obliteration of portal vessels, the portal blood for years passes through the circulation.

DR. TREMAINE, of U. S. A., thought that the essayist had made a mistake in regard to the portal circulation. It is part of the venous circulation only interposing the liver. The purpose for which the venous blood passes through the liver is not perfectly understood. He would rather explain the results by a defect on the part of the action of the cells, whose office it is to eliminate the toxic elements.

DR. J. H. MUSSER, of Philadelphia, congratulated Dr. Stockton on the very ingenious arguments which he produced to maintain his thesis. The question, however, obtains so much of a physiological aspect that he felt quite incompetent to discuss it. Clinically he had never seen any cases of hepatic coma that could not be explained either by cholæmia, by uræmia, or by toxæmia due to the loss of function of the liver. This, of course, is only his personal experience. He would state that in all cases of hepatic coma there was either pneumonia or active congestion of the lungs, or some other inflammatory condition, however so small, but sufficient to overthrow the balance of the economy, and hence disturb the functions which destroy any deleterious matter in the blood.

DR. H. A. HARE said that he thought that perhaps Dr. Stockton had lost sight of the more recent studies of Schiff and Lautenbach—viz., that any capillary network is capable of rendering blood containing toxic substances innocuous. The lungs, for example, are similarly destructive agents. Capillaries are oxidizing agents, just as a shallow, pebbly brook is an oxidizing agent. That oxidation does occur is proved by the high temperature of the blood leaving the liver. Further, all peptones are

¹ N. Y. Med. Record, 1889, i. p. 421. Boston Med. and Surg. Journal, 1889, p. 109 *et seq.*

not poisonous, but it is rather the para-peptone or hemi-albumose which are abnormally absorbed and cause toxæmia. Peptones are normally absorbed, and pre-digested food by the rectum ought to cause toxæmia if all peptones were poisonous. Again, the argument of Dr. Stockton is faulty, since the inoculations are constant and the toxæmia is rare.

DR. LYSTER, of Detroit, stated that his attention had been directed more particularly to two cases of hypertrophic cirrhosis now under his own treatment, in whom attacks of fever occur whenever errors of digestion take place. This febrile movement he attributed to ferment or ptomaines, owing largely to the inferior quality of the bile and its lessened alkalinity.

While physiologists declare that the mercurial preparations do not promote the secretion of bile, yet it is very true that there are no preparations which are more valuable in the treatment of these cases. He is accustomed to combine the mercurial, whether hydrargyri chloridi mite or the liquor hydrargyri chloridi, with alkalies, either soda or potassa salts. He is inclined to believe with M. Dujardin-Beaumetz, that the value of mercurials is due rather to their antiseptic properties than to any specific quality. The theory of antisepsis will fully account for the great therapeutic value that clinicians find in opposition to the views of pure physiologists. The liquor hydrargyri bichloridi with bicarb potasse, the equivalent of the seventy-fifth or eightieth of a grain of the bichloride, may be given three times daily, after meals, for several days at a time. We have in the portal circulation an impairment of the digestive fluids absorbed from the intestinal tract from the presence of the alkalies and the mercurials, and we escape the toxæmic influence on the systemic circulation which we would otherwise have frequently occurring. Cases where a comparatively large portion of the liver cells had become disintegrated in any of the forms of cirrhosis, and particularly in those cases of hypertrophic cirrhosis without dropsy and marked enlargement of the spleen, will be guided and aided along a comparatively safe path for a considerable period by these methods, even where severe hematemesis and slight attacks of paresis have occurred.

DR. CRONYN stated that Dr. Stockton's paper was very suggestive, that the coma in cirrhosis of the liver is due to the presence in the blood of some poison due to its state, consequent upon the arrest of the normal change which blood undergoes in the liver; we know that when the hepatic veins are lessened in their size derangement of their function alters the character of the bile, which, being absorbed in the form of cholesterol, brings about coma, and which he has been in the habit of calling cholesterinuria, a name and condition due to the discovery of Dr. Flint, Jr. The contracted condition of the veins in the liver referred to, of course increases the size of the portal and the activity of the collateral circulation; it is therefore a matter of much interest to ascertain to what extent the intercommunicating veins may be the media of the toxæmic effects so frequently seen, especially in obstinate disease of the liver.

DR. STOCKTON felt much gratification over the discussion to which this paper has given rise. He did not consider that the criticisms in the main were contrary to the claims made in the paper. Notwithstanding the late investigations mentioned by Dr. Hare, the fact re-

mains that peptones disappear in the blood without passing through a capillary network. The claim made that the blood pressure in the portal vein is lower than in the systemic veins, thus making a protection to the systemic circulation, was not spoken of. This should be explained. When the portal pressure becomes the higher, toxic conditions appear; and but for the action of other organs than the liver, and of the blood to purify itself, more conspicuous symptoms would occur. When the resistance of the blood fails then toxic symptoms do occur.

DR. J. H. MUSSER, of Philadelphia, read a paper on

SOME CLINICAL ASPECTS OF VOMITING.

He first called attention to the mechanism of vomiting, showing it was a reflex act due to excitation of a vomiting centre situated in the medulla, in intimate relation to the respiratory centre. Motor influences are transmitted from the centre to the abdominal and thoracic muscles, to the œsophagus and cardia, causing its relaxation, and to the pyloric end of the stomach, causing its closure. Excitation of this centre is made by impulses derived by afferent nerves from various organs of the body. It was shown that the vomiting may be toxic in origin, may be from organic change about the centre, as tumor, abscess, etc. And lastly, it is reflex from affections of various organs, all of which were detailed.

Attention was called to morning vomiting and other causes than those usually mentioned were detailed, as in sewer-gas poisoning, of vomiting due to subacute naso-pharyngeal catarrh and to ovarian and uterine vomiting, etc.

Some special clinical aspects of vomiting were then detailed, and it was insisted upon that in affections of various organs vomiting may for some time be the only marked symptom.

Regarding the relation of this symptom to cerebra hemorrhage the following conclusions were presented:

1. That sudden vomiting, occurring in the aged, painless, with or without nausea, with no evidence of indigestion or acute gastritis, the ejecta composed of mucus or watery fluid, is often one of the first symptoms of cerebral hemorrhage.
2. Such vomiting is not attended with the usual symptoms of relaxation, but with the sthenic phenomena which usually attend apoplexy.
3. If the usual collapse symptoms occur in a person of this age, the vomiting is now likely to be of uræmic origin.
4. If the respiration is altered in rhythm or is of normal frequency or slowed, because of the intimate relation of the centre for vomiting and the pneumogastric centre, the cause is doubtless a central hemorrhage. Hurried breathing attends the acute vomiting of other causes.
5. The occurrence of vertigo is not of special significance.
6. The prognosis is very grave in such cases.

Habit-vomiting, so-called, was then described.

DR. STOCKTON stated that without doubt vomiting due to naso-pharyngeal catarrh occurs, and that if the stomach be carefully examined evidences of chronic gastritis will be found.

DR. I. E. ATKINSON, of Baltimore, then read a paper on

SOME OF THE RARER AND GRAVER FORMS OF
CINCHONISM.

This paper treated of blindness, deafness, and general poisoning from the use of excessive doses of cinchona preparations, and was intended to show that the lavish administration of these remedies so frequently resorted to is not justifiable on account of the dangers entailed. The writer had collected more than fifty recorded cases of quinine amaurosis and showed that impairment of vision is probably much more often produced in this manner than is generally believed. Usually blindness only follows excessive doses, but definite results cannot always be attributed to definite doses, and blindness has been known to follow as small a dose as twelve grains. It may develop slowly or, as is usual, suddenly. The duration of total blindness may be from a few hours to many weeks. It is never permanent. Perfect vision, however, is never recovered. Careful observation has shown that the symptoms are characteristic and pretty constant. They are: 1. Transitory blindness, complete or incomplete. 2. Color-blindness. The color sense usually is restored ultimately. 3. Wide dilatation of the pupil, which is irresponsible to light. 4. Pallor of the optic disks and extreme diminution of the retinal vessels. 5. Contraction of the visual field. This never entirely disappears. Impairment of hearing with tinnitus is almost always present, but rarely lasts more than twenty-four hours. A number of variations from the type are noted. Idiosyncrasy undoubtedly plays an important part in the development of these symptoms. The pathogenesis of quinine amaurosis is not understood. The effect is probably a local one exerted upon the blood-vessels of the part. The dose competent to produce blindness varies greatly. Though blindness probably always results when the dose has been lethal, as much as one ounce failing to produce general poisoning has been known not to affect vision. In a number of cases patients have become blind after thirty to sixty grains given within a few hours.

Complete permanent deafness has never been known to follow the use of quinine, and permanent impairment of hearing from the same cause is very uncommon, not so uncommon, however, as is generally supposed; Roosa, Burnett, Greene, and others, have given abundant reasons for their belief that permanent partial deafness may occur. In these cases, however, a decided hyperæmia of the auditory apparatus is produced. Experiments of Kirschner, Roosa, and others, upon animals are quoted as corroborative.

General poisoning from cinchona preparations is rarely fatal. Baldion reported a death from twenty grains to a child, six years old, given in forty-eight hours. Deaths have also followed the administration of one hundred grains given in two days, and of one hundred and twenty grains in doses of five grains repeated every hour. A number of cases of alarming symptoms following not excessively large doses are given. In more severe cases the patient's condition may border upon collapse. There will be extreme prostration, with or without loss of consciousness, or coma, lowered temperature, gradual weakening of the pulse and respiration, chilling of the entire surface, copious cold sweats, deafness, dilatation and immobility of the pupils, blindness, lividity. Convulsions have been reported in a goodly number of cases.

The exact nature of these convulsions has not been determined. Experiments upon animals by Baldion, Rochefontaine, Chirone and Cusci, Soulier, and others, show that quinine has a special convulsant action. Brunton has also shown that convulsions may precede death, as a result of asphyxia.

DR. LYSTER, of Detroit, remarked regarding the use of quinine in large doses, that he quite agreed with the speaker who preceded him, that only such portion of the dose as was required to neutralize the malarial intoxication was appropriated, any excess of dose was eliminated from the system usually without any markedly injurious effect. The hypodermatic use of the quinine should be made in suspected cases of the congestive or malignant variety in regions where such cases were met with.

DR. ROBERT T. EDES, of Washington, then read a paper on

HYDRONEPHROSIS AND RENAL ATROPHY; ESPECIALLY AS RESULTING FROM FUNCTIONAL DISTURBANCES OF MICTURITION.

The ordinarily recognized mechanical causes of hydronephrosis were stated. Systematic authors admit that there are cases not explicable by any of these causes. Two cases were reported. I. A boy with frequent micturition but probable retention of urine, who presented symptoms of interstitial nephritis, and was found, after death, to have a large bladder, dilated ureters, atrophied kidneys, and hypertrophied heart; no mechanical obstacle being present. II. A little girl with albumin, casts, and pus in the copious, light urine, was noticed to have some difficulty in micturition. After dilatation of the urethra, the casts soon disappeared and later the albumin. The back pressure of urine necessary to produce moderate hydronephrosis with renal atrophy is not great. The bladder is a portion of the apparatus necessary for the discharge of the urine, and is not to be regarded simply as a passive reservoir. In order that it may perform its function properly a certain balance between the nervo-muscular apparatus promoting the discharges (detrusor urinæ) and that restraining it (sphincter vesicæ) is necessary. If this balance is disturbed either by paralysis of the detrusor or by spasm of the sphincter, pressure is thrown back toward the kidneys and dilatation of the passages takes place, followed by renal irritation and destruction of the parenchyma. In the constantly recurring spasmotic action of the bladder in cystitis, with the consequent exaggeration of the intravesical pressure, the same thing may occur, with this modification, that the urine which is backed up, being mingled with inflammatory products, the result is a pyonephrosis, rather than a hydronephrosis.

It is suggested that some cases of interstitial nephritis in the young, even when accompanied by hypertrophy of the heart, and not differing greatly in symptoms from the disease which is more familiar in persons in middle life, may have a local origin in unrecognized cases of this kind rather than the constitutional changes so prominent in the etiology of the Bright's disease of later years. A few cases are to be found in medical literature bearing on the subject of the paper.

SECTION OF SURGERY.

DR. N. P. DANDRIDGE, of Cincinnati, Chairman.

THE CHAIRMAN in his

INTRODUCTORY ADDRESS,

referred briefly to the remarkable advances that have been made in the treatment of fractures, displacements, and diseases of the spine. In connection with Pott's disease he reported the case of a child two years paralyzed, in which entire recovery, now continued four years, ensued upon careful restoration of the continuity of the cord. The various ways in which fracture may produce pressure upon the cord with consequent paralysis were considered. Operative interference must be considered first in regard to the advisability of immediate active efforts at relief.

He then reported five cases which had recently come under his observation. In some of them the application of a plaster jacket was all that was required; in others, the spinous processes were removed by the trephine. He preferred suspension by hammock and the application of a plaster jacket. Sufficient suspension can be made and an anæsthetic can be safely used if desired. The method of using the hammock was explained. It is simple, and in only one case was any pain complained of. A case was reported in which marked improvement followed simple hammock suspension. Suspension as now practised, is, however, a method so new that we cannot now determine its value.

Early operative measures—resection—should not be too readily laid aside, and in any case in which all other methods have failed, it should be tried. Although he had made several operations he had not yet secured a complete recovery. Since, however, recovery has been almost complete in many cases, since some lives have been prolonged by it, and since the operation is not now one of very great difficulty, he strongly recommended its adoption.

DR. H. H. SMITH, of Philadelphia, read a paper entitled

CONCUSSION OF THE SPINE IN ITS MEDICO-LEGAL ASPECT.

In introducing the subject he briefly reviewed the history of the establishment of the liability of railroads and other corporations for injury in England. He also announced the status of the various States of our own country on the subject.

In all cases of alleged injury of the spine with compression or concussion, frauds are always to be suspected, since statistics show that three-fourths of such cases have been found of that character; a few illustrative cases were then reported.

Admitting the liability of a surgeon to be misled in his diagnosis, let us inquire if there is any violence capable of producing concussion and compression of the cord. This must as yet be admitted as possible. The force required to produce it is, however, greater than is generally supposed.

The neuropathic disturbances which frequently follow injuries may be due to a neurotic condition of the patient, inherited or acquired; in the latter instance frequently as a result of sexual excesses. Charcot pronounces these disturbances hysteria. The speaker, therefore, concluded that real spinal concussion from injury is exceedingly rare. It is always rapidly followed by muscle-wasting. Its development is prompt—a few hours or days—after the injury and not weeks after, when his mind has had time to brood upon it.

Illustrative of the prompt development of symptoms in cases of injury of the cord, several cases were reported with the results of autopsy and microscopic examination. The following conclusions were announced:

1. Concussion of the spine is no longer a matter of doubt but may sometimes occur as the result of various forms of violence, there being nothing peculiar in the application of the force to the body, as the result of derailment or collision of railroad trains.

2. The pathological changes noted in the molecular structure of the cord as the result of shaking, jarring, or so-called concussion of the cord, when attended by paralytic symptoms, may be due to hemorrhagic effusion or be shown post-mortem, in softening or localized or limited atrophy. In cases due to hemorrhage the symptoms may be improved by judicious treatment and permanent disability prevented.

3. The possibility of preexisting neurasthenia, or hysteria, or fraud on the part of a claimant, should be carefully noted in forming a diagnosis in these cases.

4. As the question of permanent disability, justifying exemplary damages, is frequently raised in claims of the kind alluded to, it should be recollected in forming a prognosis that numerous cases are reported of recovery or marked improvement in a few weeks, and one in three years, even after the occurrence of paralysis.

5. No physician should go into court and swear that a plaintiff has had a concussion of the spinal cord or of its nerves, unless he has proved the disturbance of the normal functions of the cord, as shown in sensation or motion, or both, and that the symptoms appeared soon after the injury.

DR. H. JUDD, of Galesburg, Ill., followed with a paper on the same subject. The facts stated in this paper, he said, were drawn solely from his own experience as a surgeon, from cases resulting from or suggested to the patient by accidents; cases in which all objective signs of injury, if any ever existed, had passed away; cases involving the question of supposed or alleged concussion of the spine and which were under observation from a medico-legal aspect; cases in which compensation for personal injury was sought.

His excuse for reading a paper on these cases, he said, was the fact that the question of injury or disease of the spinal cord, if it can exist, is becoming a question of business interest to the surgeon. It is a condition which is frequently estimated in the currency of the country.

The essayist then based his estimate of these cases upon the symptoms which accompanied these injuries in the times which preceded the enactment of laws making corporations liable to the injured. We might, he said, permit these people who practise frauds upon corporations to go on and rob them, saying it was none of our affair, but it is our duty to endeavor to prevent it, since it only trains and encourages malingerer and dishonesty. Several fraudulent cases were then reported.

In conclusion, he stated that he questioned the possibility of concussion of the spine.

DR. WILLIAM BRODIE stated that he believed that such a condition as concussion exists. He did not believe that a correct diagnosis could be arrived at in many cases, short of a jury trial. There is only one way to treat these cases, and that is, for the railway surgeon to tell the companies to settle at once, within twenty-four hours, if possible.

DR. B. A. WATSON, of Jersey City, thought that we are too apt to consider concussion of the spine the condition described by Mr. Erichsen. If any such condition in the spine analogous to concussion of the brain exists, it is exceedingly rare. If any rupture of the ligaments, with laceration of bloodvessels exists, it is too rare to be considered. No physician should testify to the existence of concussion of the spine in a case presenting no objective signs. From his own experiments he had concluded that most of these cases suffer from lacerations of visceral organs much more frequently than from concussion of the spine. Laceration of the lung with the production of infarction is very common; laceration of liver, spleen, kidney, and even rupture of bladder occur.

DR. MURPHY, of Minnesota, stated that he had been interested in this subject a great many years, but that he did not meet with the success reported in the paper of the Chairman. All of the six cases he had treated during the last winter with plaster and other methods died.

DR. PANCOAST, of Philadelphia, thought that it should be borne in mind that the people had rights to be protected, and that we should not yield too far in our desire to protect corporations from imposture. He thought the law is at fault in demanding to know whether there is a permanent injury. Men should be protected and recompensed for temporary injuries as well as for permanent conditions. He objected emphatically to the suggestion of a former speaker, that the ligaments may stretch. Ligaments, healthy or diseased, *never* stretch.

DR. PANCOAST moved that the discussion of the paper of the Chairman, Dr. Dandridge, be made the order of the day. The motion being carried, he spoke freely on the subject of the rupture of ligaments, claiming that it is due to the tearing of the fibrous connective tissue.

DR. MAURICE RICHARDSON, of Boston, then read a paper on the

SURGERY OF THE PERIPHERAL NERVES.

It consisted of a *résumé* of the operations that have been made on the peripheral nerves for various forms of neuralgia. The first operations described were those which had been performed upon the inferior dental nerve, with a view to its division, stretching of it, or its removal.

The treatment of neuralgia of the sciatic nerve by stretching of the nerve is not held in favor since it has had a fair trial. It should, however, in all probability be resorted to in cases of inveterate neuralgia of the nerve. From original investigations on the cadaver, he did not believe it possible to exert any traction on the spinal cord by traction on the sciatic. Traction on the nerves of the upper half of the body he believed was of no value whatever. Neurectomy he considered the proper and only efficient means for their relief.

The last subject discussed was nerve-suture, with a report of cases. In a large majority of cases union was perfect and function re-established. In no case, however, was there evidence of the union by first intention alleged by some. If a large piece of nerve has been lost, he preferred the introduction of catgut to that of nerve-fragment. Nerve-grafting was also referred to.

In conclusion, the essayist described the condition of nerve which he had found in nerves affected by neuralgia in which pain is complained of, as in the musculo-

spiral, the median, the ulnar, in cases having an obscure history of traumatism.

DR. PANCOAST expressed surprise that the essayist had attributed to Mr. Victor Horsley the operation of excision of a portion of nerve for neuralgia of the trigeminus. This operation was first performed, to the surprise of the profession, by his distinguished father, whose aim it was to remove as much as possible of the nerve, even endeavoring to withdraw a portion of it from within the oval foramen before dividing it. He performed the operation several times, as had also the speaker.

DR. DEAVER, of Philadelphia, complimented Dr. Richardson on his easy method of reaching the temporomaxillary nerve, and coincided with him in his preference for neurectomy to stretching.

DR. W. O. ROBERTS, of Louisville, reported several cases of operation on the inferior dental nerve, with the dental engine.

DR. GORDON, of Portland, Me., reported a case in which repeated stretching of the sciatic nerves yielding only transitory relief, the anterior crural nerves were stretched with the result of apparent cure.

DR. BURNS reported two cases of excision of the superior maxillary nerve in one of which there had been subsequently removal of the inferior branch.

DR. RICHARDSON explained that his paper had nothing to do with Horsley, and did not claim any assertion like that referred to by Dr. Pancoast. As he had read only a small portion of his paper, he could readily understand any misunderstanding which had arisen in the discussion. In conclusion, he described the method, preferred by but not original with him, for removal of the infraorbital nerve and some of the descending branches of Meckel's ganglion through the orbit.

SECTION OF OBSTETRICS AND DISEASES OF WOMEN.

W. H. WATHEN, M.D., of Louisville, Chairman.

DR. HORATIO R. STORER, of Newport, R. I., spoke of THE MEDALS OF BENJAMIN RUSH, OBSTETRICIAN.

The paper called forcible attention to the fact that to Dr. Rush was due the first suggestion, or rather prophecy, of obstetrical anesthesia. He quoted various passages from Rush's works which demonstrated that he was a skilful obstetrician. In the title of one of his papers he closely associates the pains of labor with its dangers, announces that they can both be lessened, recognizes that they are the potent cause of subsequent disease, and teaches their prevention. Particular attention was called to the following statement of Rush: "I have expressed a hope in another place that a medicine would be discovered that should suspend sensibility altogether, and leave irritability or the power of motion unimpaired, and thereby destroy labor pains altogether." The importance of this extraordinarily interesting passage seems to have been recognized only by Channing, Gaillard Thomas, and Faget of New Orleans. It was lost sight of entirely during the ether-chloroform controversy. Exhaustive research has been made by the author, aided by Dr. Toner, of Washington, which has resulted in failure to find any other reference to it, and similar want of success has followed the studies of Drs. Chadwick, Gaillard Thomas, and Mundé, to whom the author appealed as

those who were most familiar with modern obstetric literature.

Dr. Storer exhibited enlarged photographs of the two extremely rare medals of Rush which are in his collection, and expressed the hope that they would be of use in giving the correct features of the "American Sydenham" when his monument, undertaken by the Association, shall be raised, and that the paper itself might tend toward a better appreciation of the true merits of the man himself.

DR. W. W. POTTER, of Buffalo, read a

NOTE ON THE USE OF BORACIC ACID IN GYNECIC PRACTICE.

He first used boracic acid as a substitute for iodoform on account of the bad effect of the latter upon the hands. He found that boracic acid delayed decomposition of uterine and ovarian discharges, and that a tampon could be retained for a week without discomfort or annoyance when this antiseptic was used. In his experience it had also been of service in cases in which sterility existed, and he believed it exerted such chemical action upon the uterine secretions that fecundation became possible. He had also found it one of the best dressings for operative wounds of the female genitals.

INVERSION OF THE UTERUS; REDUCTION BY A NEW METHOD; EXHIBITION OF THE INSTRUMENT.

DR. H. O. MARCY, of Boston, said that inversion may be partial or entire, and is probably more frequent than is usually supposed, especially in the practice of midwives. The shock and hemorrhage attending the accident are usually severe, and it is not unusual for the patient to succumb within a very short time after the accident has occurred. Hence the principle that reduction should be accomplished as soon as possible, the patient being then kept upon her back, with the vagina tamponned for a sufficient period. The methods of reduction of Emmet, Noegegerath, and Thomas were described and commented upon. Spontaneous reduction could occur, but it was thought that it rarely did. The first systematic attempts at reduction were reported by Prof. J. T. White, of Buffalo, in 1858, Tyler Smith reporting his method in the same year. The method of Winey, of Boston, was thought to be sound in principle, and it had been successful in practice. Barnes's suggestion, that lateral incisions should be made in the cervix before attempts were made at reduction, was also a good one, and had been followed by good results. Thomas's method was once considered bold, though ingenious, but now that laparotomy is so frequently performed, it would be adopted with less hesitancy. It has been demonstrated, however, that it may be unsuccessful. The author's method was then described, the principle being that traction was applied to the cervix while an equal amount of pressure was applied to the fundus, the opposing forces harmonizing and quickly effecting reduction. The present perfected instrument was reached after a long series of experiments, and has been tried in one case, in which complete reduction was effected in twenty-six minutes. The method consists in passing four stout ligatures through the cervical tissue at equal distances from each other, and these are attached to two parallel rings or hooks upon the side of a long shaft, the hooks working in slots. At the end of the shaft is a

hard-rubber cup which receives the fundus. The shaft contains a screw, which is worked by a nut at its lower extremity, the shaft being graded in pounds up to fifteen, according to the number of turns of the screw. As the screw is turned the cervix is dragged down, and at the same time the fundus is pushed upward and through it.

DR. JOSEPH PRICE, of Philadelphia, reported

A SERIES OF FIVE HUNDRED CASES OF CONFINEMENT IN A MATERNITY.

There had been no deaths and no septicæmia in this series, the institution in question being the Preston Retreat, in Philadelphia. Absolute cleanliness of person and surroundings, abundance of water, soap, and pure air were the means which had yielded such gratifying results. Of these cases fifty-two had been cases of instrumental delivery, many of the mothers having contracted pelvis. There was one case of *placenta prævia*, three of twins, also several face and breech presentations.

DR. FRY, of Washington, read a paper on the

APPLICATION OF FORCEPS IN TRANSVERSE AND OBLIQUE POSITIONS OF THE HEAD, WITH A DESCRIPTION OF A NEW FORCEPS.

He had sought to obtain the views of many practitioners as to their method of using forceps, and had addressed them in a circular letter. This brought eighty-two responses, of which forty-two stated that the custom was to apply the instrument to the sides of the head; thirty-one others applied to the sides of the pelvis, and in the others the method was indifferent. The author's instrument was curved on the flat, and could be applied in either transverse or oblique positions to the bi-parietal diameter of the fetal head. Many cases in which there was death or paralysis of the fetus, were those in which the blades of the ordinary instrument were not at the sides of the pelvis, its pelvic curve being a source of injury when applied in the conjugate diameter. The posterior blade of the author's instrument has both a cephalic and a pelvic curve, the anterior has only the cephalic curve. The instrument has also a screw for the regulation of the compression and a traction rod which is attached to the anterior blade and aids in bringing the head down to the brim of the pelvis.

DR. WILLIAM S. STEWART, of Philadelphia, read a paper entitled

WHEN SHOULD THE OBSTETRICAL FORCEPS BE USED, AND WHAT FORM OF INSTRUMENT IS REQUIRED?

Such conditions as eclampsia, exhaustion, uterine inertia, large or impacted fetal head, called for the use of obstetrical forceps. The membranes must also be ruptured, the os dilated and its lips retracted; there must be a knowledge of the position of the child, the bladder and bowels must be empty. It would seem to be self-evident that one should use that instrument with which he was most familiar or which he found most effective. An objection to the ordinary forceps with crossed handles was that, while it was easy of application for the first position, it was difficult or dangerous for the second. Hence the author's instrument, in which the handles are parallel and do not cross. It has also a second joint to the handles and hand-piece, the traction being entirely accomplished with the latter. The blades

may be those of the Simpson, or Hodge, or Wallace forceps. The traction and compression with the author's instrument are regulated by the resistance offered; also the principal joint in the handles is not fixed, so that there may be very complete adaptation of the head to the pelvis. Either blade can be applied first, and, in the author's opinion, the instrument insures greater safety to the mother and child than by customary means, and greater ease to the accoucheur.

SECTION OF DISEASES OF CHILDREN.

J. A. LARRABEE, M.D., of Louisville, Chairman.

DR. E. F. BRUSH, of Mt. Vernon, N. Y., read a paper on

COW'S MILK FOR INFANT FOOD.

The medical profession, he said, is agreed that nothing equals good cow's milk as a food for infants, and therefore it is to be regretted that attention has not been given by the profession to reforming the breed of cattle and the handling of milk rather than to artificial substitutes. In milk for infant feeding there should be considered (1) the variety of fats, (2) the amount of albuminoids, (3) of salts, (4) the handling of the milk, and (5) the health of the cow.

First. As regards the fats, the usual processes of chemical analysis lead to an underestimate of the fats in cow's milk, and that of these fats we have no late authoritative analysis, a neglect on the part of chemists which leaves us in doubt as to which of the fatty acids are the mischief-makers in milk. These fatty acids have more to do with the development of poisons than the albuminoids have and are the cause of digestive derangements. Second. The albuminoids vary considerably with the time or habit of extracting the milk, milk extracted every two hours not being likely to possess as much or as ripe albumen as that drawn off every twelve hours. In health the albuminoids are constant, but materially affected in disease. This affection is not surprising when we examine the mammary sources of milk, for then there are found inflammations, calculi, clots of fibrin, etc., while the gland is at the same time subject to infiltrations, tubercular deposits, and eruptive diseases. In all cases variations in the amount of albuminoids must be ascribed to sickness. Third. The salts also have not lately been determined by chemists and we do not know how constant the occurrence of these salts may be, though we can assert that they are influenced both by the health and the food of the animal. Hence the land on which a cow is pastured will indicate fairly what we may expect to find as salts. The nutritive value of the sugar is overestimated, as is shown by the milk of carnivorous animals. Condensed milk or concentrated sugar of milk is not to be recommended as an addition to milk, but cane sugar preferred. The chemist's ideal food is a failure and the idea that milk must contain such and such constituents in such and such proportions is a popular error. Fourth. The cow must be studied, "for milk is the scavenger of the cow's body," and if it will not nourish the infant she is sick or the milk badly handled. A faulty condition of the cow is indicated by alteration, the albuminoids, bad food by the loss of fats and salts, and bad handling by the ptomaines. The cow has an abnormally high temperature, her organs of generation are in unnatural activity and she is made a machine for

producing milk. It is no wonder then that she is, as a rule, an unhealthy animal. Owing to the low price of milk the delicate animal is rarely fed properly, and the same cause compels the farmer to utilize every drop of milk, be the cow sick or well. Good food is the prime essential for producing good milk. Fifth. Milk is affected by its surroundings in the cow-house, and the method of getting rid of the odor thus acquired by salt-petre cannot be too severely censured, for the addition of the nitre united with the glycerides may produce poisons approximating to tyrotoxicon. No chemical substances should ever be added. Milk should not be beyond a few hours distance, for long travel must deteriorate milk. Light, like heat, hastens decomposition, therefore glass bottles should not be used. The milk ought not to be given to the infant warm, for then it coagulates like too-old milk. Sterilized milk may be employed if we abandon all hope of improving the quality of milk.

The remedies for these evils are a better cow, one not closely inbred, well-fed with good, sound food, and well attended to. The cheapness of milk is the reason why we have not better milk and the inferior milk suggests the use of substitutes. If the price of the latter were added to the price of such milk the extra money would enable the farmer to buy better cows and better food and improve the quality of his products. This he ought to be compelled to do. Let us not recommend patent baby foods, but good, high-priced milk, and then if any trouble arises lay the blame on the milkman. Dairies for supplying infants' food should be under strict sanitary supervision. Such an ideal dairy should consist of spayed cows.

(Dr. Bush was given a special vote of thanks for his valuable paper.)

DR. J. A. JEFFRIES, of Boston, said a large number of women cannot feed their babies and many will not; hence the necessity for a proper supply of cow's milk. It is important to obtain that with fat as near like the mother's as possible, that the proper adipose tissue may be deposited in the infant's body. Recent analyses show that both the fats and albuminoids vary with the condition of the mother. A child did badly: the mother's milk was found too high in albuminoids, and on dieting the mother the child recovered. Milk sugar is a valuable aliment and not so liable to fermentation as cane sugar. Where milk can be got to the child within three or four hours after drawing, sterilization is not so important, but when, as in cities, twelve or twenty-four hours must elapse, it should be sterilized immediately on being drawn, and then forwarded in sealed bottles.

DR. EARLY, of Pennsylvania, considered diseases of cattle a frequent source of contamination of milk and referred to his investigations of dairy farms near Philadelphia and Camden, where milk from animals sick with pleuro-pneumonia was supplied to consumers.

DR. SEARS, of Texas, doubted if disease was conveyed by milk; certainly not to adults.

DR. CHRISTOPHER, of Cincinnati, related the results of his inspection of dairy farms near Cincinnati. Cows fed on distillery slops were much handsomer in appearance than those properly fed, and their milk was richer in cream. They urinated almost constantly. He attributed this to their confinement setting up fatty tissue changes. There is a peculiar condition of the albu-

noids in this milk leading to rapid decomposition. He did not agree with Dr. Brush that the fatty acids were the poisonous elements. Ptomaines are nitrogenous bodies and can only be formed from volatile fats. There is none. The fatty acids are sometimes volatile, but this does not interfere with chemical analysis.

DR. BRUSH, in closing the discussion, gave prominence to the points that living foods contain some element lacking in preserved foods. Condensed milk may be perfectly pure, but it has gone through a process that robs it of some nutritive quality. So with various artificial foods, chemically desirable. The distillery-stable cows are sleek-looking, but they are oedematous, not fatty. It is a fact of observation that the amount of fats and salts in cow's milk can be altered by feeding, but it is only disease that causes a variation in the albuminoids given by any individual animal.

WEDNESDAY, JUNE 26, 1889.

SECTION OF OBSTETRICS AND DISEASES OF WOMEN.

DR. W. H. WATHEN, of Louisville, read a paper on the PATHOLOGY OF ECTOPIC PREGNANCY AND PELVIC HÆMATOCELE.

He based his argument upon the following premises, viz.:

1. The ovum is never impregnated in the uterine cavity, and the conjugation of the male and female elements must take place before or just after the ovum enters the tube.
2. Ectopic pregnancy is always primarily tubal, with the possible exception of ovarian pregnancy; the tube usually ruptures before the fourteenth week into the folds of the broad ligament or into the peritoneal cavity.
3. Abdominal pregnancy cannot occur except as a result of primary or secondary rupture, and if the villous or placental attachments are destroyed the ovum immediately dies, because it cannot form secondary attachments to other structures.
4. If, in rupture into the peritoneal cavity, the ovum retains villous or placental attachments, it may be possible, under certain conditions, for the pregnancy to continue, though this is not probable. If the amnion is ruptured in the early months, the embryo or fetus will die.
5. So-called interstitial pregnancy does not always rupture into the peritoneal cavity, though it usually does.
6. If we define pelvic hæmatocoele as an encysted or confined tumor formed of blood, then intraperitoneal hæmatocoele is not possible.

Tait is almost alone in his belief that in normal pregnancy the conjugation of the two elements takes place in the uterus, and the author does not think his premises upon this subject are correct nor his conclusions logical. His assertion that the spermatozoids cannot pass out through the Fallopian tubes unless disease has destroyed the ciliated epithelium, is based upon no positive evidence and is contrary to what has been proven in observations upon the lower animals. The ciliated epithelium has no effect upon the movements of the spermatozoids, and their inherent power of movement is proven in those cases in which women have become pregnant with a nearly imperforate hymen, and with atresia vaginæ with only a

small fistulous and diseased canal leading to the uterus. If the ovum is not impregnated before, or just after, it enters the tube, degenerative changes will destroy its vitality before it reaches the uterus. If, after impregnation has occurred, the surfaces of the endometrium were not in immediate contact, the ovum would gravitate to the lower segment of the uterus, causing placenta praevia, or else it would pass out into the vagina. The ovum cannot form villous attachments until it is held immovably in the maternal structures, and this is not possible, except in the tube or in the uterine cavity. The reports of ovarian pregnancy are numerous, but they seem to be based upon insufficient evidence. In none of them has ovarian stroma been found unless confined to one side of the sac, and this may easily be due to tubal pregnancy in which rupture has occurred into the folds of the broad ligament.

Parry's statistics of ovarian or abdominal pregnancy were all collected from imperfect or mutilated records made by men of no experience in microscopical and pathological research, and they are practically of no value as proof that pregnancy may primarily occur outside the tube. Ectopic pregnancy may occur at any point in the tube, from a short distance within the fimbriated extremity to the uterine cavity, and is caused by partial or complete closure of any part of the tube, which is usually the result of desquamative salpingitis. It is improbable that tubal pregnancy continues in any case until term, rupture usually occurring prior to the fourteenth week either into the folds of the broad ligament or into the peritoneal cavity. Primary intra-peritoneal pregnancy is impossible because the ovum cannot be held securely in any one place and form the necessary attachments. The ovum precipitated into the peritoneal cavity dies, therefore, for want of nutrition.

The placenta in extra-peritoneal pregnancy may attach itself to the uterus, omentum, intestines, pelvic and abdominal wall, etc., by stripping off and carrying before it a layer of peritoneum, and many such cases have been reported as abdominal pregnancies. In the latter months of pregnancy the ovum may possibly continue to develop in the abdomen after rupture of the amnion. In intestinal pregnancy there is usually rupture into the peritoneal cavity, but not always as Tait asserts.

Pelvic hæmatocoele sustains such intimate relations to ectopic pregnancy that it is not easy to describe the pathology of the one without referring to the other. Pelvic hæmatocoele is usually considered an encysted, intra- or extra-peritoneal blood tumor in the pelvis which may extend into the abdominal region. The author does not believe it possible for an accumulation of blood in the peritoneal cavity to become encapsulated so as to form a well-defined tumor in the pelvic or abdominal cavity. If it were possible to have encysted intra-peritoneal hæmatocoele, why does it never occur after abdominal sections for the removal of a diseased tube, ovary, or uterus? Encysted hæmatocoele may result from a sudden cessation of a pseudo-menstruation that sometimes follows laparotomy, but in such cases the blood is effused into the areolar tissue under the peritoneum, and not into the abdominal cavity. A blood tumor may extend above the pelvis, and even to the umbilicus, but this does not indicate that the hemorrhage has been into the peritoneal cavity. In intra-peritoneal hemorrhage no well-defined tumor can be

felt *per vaginam* or by abdominal palpation, while in extra-peritoneal hemorrhage an error in diagnosis is hardly possible. Intra-peritoneal hemorrhage is almost always caused by primary or secondary rupture of a tubal pregnancy, and the shock and other evidences of internal hemorrhage will usually point to the cause.

The treatment indicated is abdominal section and ligation of the bleeding vessels. Encysted haematocele may be caused by sudden metrorrhaxis of normal menstruation, or pseudo-menstruation following abdominal or pelvic operations, or by rupture of a tubal pregnancy into the folds of the broad ligament. The symptoms are sudden access of pain, faintness, accelerated pulse and, possibly, elevation of temperature. The tumor may not be felt above the pelvis, or there may be a well-defined, fluctuating tumor extending as high as the umbilicus. The diagnosis is less readily made if the case is not seen until some days after the hemorrhage has occurred. Extra-peritoneal haematocele usually results in speedy recovery, with suitable care and precautions, the blood being absorbed. Suppuration or rupture into the peritoneal cavity rarely occurs. Should there be symptoms indicating that either of these conditions has occurred, the abdomen should be opened, the cavity thoroughly cleansed, and a drainage tube introduced. If fluctuation is felt *per vaginam* the tumor should be entered through the vaginal vault, otherwise laparotomy should be performed.

DR. T. PARVIN, of Philadelphia, in a paper on

CASUISTRY IN OBSTETRICS.

said that questions of conscience must always be recurring in the course of the practice of obstetrics. It might be said that all law in all civilized lands is only casuistry. Among the questions of conscience which are proposed to the obstetrician for answer is that of Comte: If the object of pregnancy is the perpetuation of species, and cohabitation during pregnancy is a source of danger to the foetus, should cohabitation be allowed? The author would answer this question decidedly in the negative, considering that it is improper, immoral, unjust, and injurious to both mother and foetus. Another pertinent question was:

"Should a doctor inform his patients as to the means of preventing pregnancy, admitting that he had the knowledge?" The reply was, that such information would usually be unwise, for though there might be excuse for such information on the score of serious disease in the parents, or inability to protect and support children should they be born, such information was usually extensively disseminated, and its influence would be pernicious. The question as to the propriety of artificial miscarriage is also an important one, and the justifiability of the operation was recognized in such cases as those in which blindness would result from the continuation of the pregnancy.

Such operations as amputations of the pregnant uterus were considered justifiable in certain cases of great pelvic deformity, and the testimony of Tait in this matter gives weight to such an opinion. It must also be admitted that there are also cases in which embryotomy or craniotomy, or some other destructive operation, is not only justifiable but imperative in the interests of a parturient woman. This statement did not at all conflict with that which had reference to the usefulness of the Cesarean

section. The latter operation should be preferred to craniotomy in those cases in which the conjugate measured two inches or less.

DR. WILLIAM H. PARISH, of Philadelphia, then read a paper on

PELVIC ABSCESS IN THE FEMALE.

He believed that the existence of pus in the areolar tissue was rare compared with its existence in the pelvic cavity or the organs of the pelvis. He would divide pelvic abscess into three varieties: 1, areolar abscess; 2, intra-tubal and ovarian abscess; 3, intraperitoneal abscess. The first form is usually a sequel of labor, the latter having been severe and accompanied with more or less injury to the uterus, the cervix, the vagina, etc. Secondary areolar abscess may occur, however, from gonorrhœa, from haematoma, etc. He believed that so-called chronic cervicitis, without precedent inflammatory disease of the pelvic organs of some kind, did not exist. The second form usually involved both the tubes and the ovaries, and was more frequently seen than the first. Associated with this there might be a plastic inflammatory condition of the pelvic peritoneum. The term pyosalpinx gave little idea of the extent of this form of pelvic abscess which was possible. Intra-tubal abscess was very frequently due to gonorrhœa, which frequently occurred in young married women, though it might not appear for some months after marriage. It might also come from various forms of traumatism, from septic infection other than gonorrhœa communicated from the uterus.

Septic salpingitis and ovaritis frequently occurred after abortion, in fact rather more frequently than areolar abscess. The careless use of uterine sounds and tents was also responsible for many cases of this condition. In treating either of these two forms of abscess a high degree of operative skill is requisite. Another requisite, in order to a successful issue, is perfect drainage. Aspiration of such cases is usually not advisable, and is fraught with danger. If there is bulging and fluctuation in the vagina, an incision through its wall is indicated. If by such incision an intra-tubal abscess is opened, it may be recognized by the fact that the walls of the abscess sac are smooth to the feel, and also do not collapse. In most cases it is quite inadvisable to operate through the rectum. In any case in which an incision is made, care should be taken to avoid pulsating vessels. Likewise, in placing a drainage-tube it must be provided that it does not come in contact with the wall of a large-sized bloodvessel. If the abscess involves the tube, the necessary treatment is laparotomy with removal of the diseased structures, and the insertion of a drainage-tube. Cases have been reported in which intra-tubal abscess has been cured by drainage through the uterus, but such cases are believed to be of very rare occurrence. The method of stretching the edges of the abscess-sac into the abdominal wall, as advocated by Tait, is not considered desirable for most cases.

The intra-peritoneal variety of pelvic abscess is that in which the pus is in the pelvic cavity. It is not as frequent as that which proceeds from diseased tubes. It may occur from the leakage of pus, from a pyo-salpinx into the peritoneal cavity, from a peritonitis, from lymphatic inflammatory conditions, from initiating ligatures after abdominal section, etc. The quantity of pus in the

abscess may be small or it may be very large. In one of the author's cases the quantity was two gallons. In all cases of this variety there should be early operation. Should a fistulous tract result it not infrequently indicates want of skill on the part of the operator.

DR. JOSEPH TABER JOHNSON, of Washington, then read a paper on

TETANUS FOLLOWING OVARIOTOMY.

It was primarily the report of a very rare case. The patient was sixty years of age, and an abdominal section was believed to be indicated. A small ovarian cyst was removed, a drainage-tube being introduced, and all progressed favorably until the twelfth day. At that time symptoms of tetanus appeared which increased in intensity until the fifteenth day, when the patient died, with evidences of heart failure. Careful investigation was made, but it was believed that the author's hospital, in which the operation was performed, was in a perfectly sanitary condition. The author's horses were also without disease, and the author's hands were free from injury; the horses had not been driven by him for some days. This complication has reported only a very few times, and has usually occurred within a very few days after the operation. Bernouil recently announced his belief that it was communicated to human beings by horses, the medium being a bacillus. This should teach all who do abdominal sections to avoid the possibility of infection from horses.

DR. A. REEVES JACKSON, of Chicago, read a paper on THE INJURIES OF THE BLADDER DURING LAPAROTOMY, INCLUDING A REPORT OF SIXTY-SEVEN CASES.

The data in the author's paper were collected from various sources. Some of the cases had been already published, but the greater number had been obtained through personal correspondence with the operators in whose practice the accidents had happened, and were now made known for the first time. Of course, it was admitted that the list was incomplete. Some surgeons manifest a reluctance to make known the various mishaps which occur in their operative experience, perhaps with the belief that a knowledge of them might injuriously affect their reputation among their colleagues. The author considered this an error of judgment. Surgeons should be honest as well as skilful, for their integrity would be quite as likely to receive recognition as their dexterity, and was certainly of greater value.

Considering the conditions under which bladder injuries may occur during laparotomy, it was not necessarily discreditable to any surgeon to meet with them, for they might not be due to any carelessness or lack of skill on his part. In many of the cases cited no possible degree of diligence could have averted the accident. Adhesions of the peritoneal surface of the elongated bladder to the anterior abdominal wall, frequently could not be known in advance, and their existence was only demonstrated after the viscera had been opened. The use of the catheter as a means of diagnosis was not always available, because the compression of the bladder against the pubes might prevent the introduction of the instrument beyond that point.

Certainly, this attempt should always be made in any case of suspected difficulty, and would seem to be even a proper and unobjectionable routine method.

Another useful precaution was to avoid prolonging the abdominal incision toward the pubic bone until the opening into the peritoneum had permitted the relations of the bladder to be ascertained. The mortality of the cases in which the bladder had been opened was large, being about thirty per cent., but this was due to the complicated and serious character of the cases in which the accident had occurred, the consequently increased length of the operation, and the greater danger from shock, rather than to the mere vesical injury.

The latter did not seem, in itself, to be very important as influencing the recovery of the patient, but should a fistula occur it would signify great discomfort, and also chagrin and annoyance to the surgeon. Inasmuch as the bladder was recognizable with more difficulty when empty than when full, it would be better in cases which presented doubtful features to commence the operation with the viscera more or less distended. When its position had become known, it might be emptied by an assistant.

As to the treatment, if an opening has been made it should be closed at once with a continuous suture of cat-gut or fine silk, the serous surfaces of the wound being inverted, and a permanent catheter being used for two days. At the end of that time it may usually be dispensed with. If the wound exceeds two or three inches in length the catheter should be retained three or four days longer; and in all cases the catheter should be retained as long as the urine contains blood. Should urine appear at the abdominal wound subsequent to the operation under conditions which would make it dangerous or inexpedient to reach the seat of the vesical injury, the catheter should be used continuously or at short intervals to lessen the quantity of urine which escapes through the fistula and thus aid in its closure. If the fistulous opening shows no disposition to close after two or three months, the edges should be freshened to the depth of half an inch or more and stitched together.

In exceptional cases it may be expedient to affix the wounded edges of the bladder within those of the abdominal incision, in the manner detailed by Thomas and others, but as this plan must interfere with the subsequent contractility of the bladder, it is not to be commended as a customary practice. The suturing and dropping of the bladder is the better method.

NEWS ITEMS.

The New Jersey State Medical Society.—At the late meeting of the New Jersey State Medical Society the following officers were elected for the ensuing year:

President.—B. A. Watson, M.D., of Jersey City.

Vice-Presidents.—James S. Green, M.D., of Elizabeth; E. J. Marsh, M.D., of Paterson; and George T. Welch, M.D., of Keyport.

Corresponding Secretary.—William Elmer, Jr., M.D., of Trenton.

Recording Secretary.—William Pierson, M.D., of Orange.

Treasurer.—W. W. L. Phillips, M.D., of Trenton.

Standing Committee.—T. J. Smith, M.D., of Bridge-ton; D. C. English, M.D., of New Brunswick; and J. G. Ryerson, M.D., of Boonton.

After ratifying some changes in the By-Laws, and the adoption of some routine business, the meeting adjourned, to meet next June at Schooley's Mountain.

Association of Acting Assistant Surgeons.—The Association of Acting Assistant Surgeons of the United States Army held its first annual meeting at Newport, R. I., on Monday evening, June 24, 1889. Seventy-seven members have been enrolled. The following list of officers was elected for the ensuing year:

President.—A. Reeves Jackson, M.D.

Vice-Presidents.—J. L. Ord, A. J. Comfort, D. S. Lamb.

Treasurer.—R. J. Dunglison.

Registrar.—Benjamin L. Holt.

Recorder.—W. Thornton Parker.

Council.—H. M. Deeble, S. S. Turner, W. E. Sabin, H. R. Porter, J. P. Pratt, H. E. Turner, S. B. Stone, John S. Warren, S. O. L. Potter, E. W. Thompson, and John T. Nagle.

Applications for membership should be addressed to W. Thornton Parker, M.D., Narragansett Pier, R. I.

An Oxford Degree for Dr. Billings.—According to the *New York Medical Journal*, the University of Oxford will confer an honorary doctorate on Dr. J. S. Billings, U. S. A., in consideration of his valuable labors in connection with the Army Medical Museum and Library, the *Index Catalogue*, and the Johns Hopkins Hospital.

The Development of Cholera Bacilli.—If LOEWENTHAL'S experiments prove anything as regards the generation or evolution of the cholera poison in man, it is that certain states of the digestive system and of digestion are necessary for its production, and that if these conditions are not present, the comma-bacilli, which are presumed to be concerned in the manufacture of the virus, fail to produce it. Certain observations of Dr. D. D. Cunningham's, which are published in the most recent issue of the "Scientific Memoirs," edited by the Surgeon-General, would indicate that the development of these bacilli outside of the body also depends on favoring conditions.

"Dr. Cunningham conducted a series of experiments on the behavior of choleraic comma-bacilli in soil and water of various qualities, and he shows that, under ordinary circumstances, even in an endemic locality such as Calcutta, there is very little probability of their multiplying to any great extent, or persisting for any prolonged period in soil or water to which they may gain access. It further appears that this is due to their incapacity to hold their own in the struggle for existence to which they are exposed with the schizomycete, and other organisms normally present in the media, as, where the latter are sterilized, the persistence and multiplication of commas occur just as they would do in any artificial sterilized medium of suitable quality. Dr. Cunningham, taking these results along with others of a similar nature obtained by other observers as a basis, argues that, even if it should be granted that the comma-bacilli are the efficient cause of choleraic symptoms, they must be regarded as holding a very secondary place in the causation of epidemic diffusion of the disease, and that it is peculiarities in conditions of locality which must be regarded as of primary importance, seeing that without these the bacilli would neither be able to establish themselves in sufficient numbers and with sufficient persistence, nor be able, even could they do so, to affect the population in epidemic

proportions. The practical conclusion which is arrived at is, that it is to improvements in local sanitation, and not to the enforcement of quarantine regulations, that we must look as a means of preventing the occurrence of spreading epidemics.—*The Indian Medical Gazette*, March, 1888.

The Nationality of Viennese Medical Students.—Of the 3185 medical students at present studying in the University of Vienna, 530 are foreigners. Of these, Russia furnishes 118; America, 105; Roumania, 78; Servia, 50; Germany, 46; England, 40; Bulgaria, 18; Greece, 13; Turkey, 10; Switzerland, 12; France, 5; Belgium, 8; Italy, 9; Sweden, 3; Holland, 5; Africa, 1; and Australia, 3.—*The British Med. Journal*, May 11, 1889.

The Pope's Physician.—According to the *Medical Record*, DR. GIUSEPPE LAPONI, a young and distinguished graduate of the Bologna school, has just been appointed body physician to his Holiness Pope Leo XIII., in succession to Dr. Valentino, deceased.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM JUNE 18 TO JUNE 24, 1889.

By direction of the Secretary of War, the extension of leave of absence on surgeon's certificate of disability granted WILLIAM H. FORWOOD, *Major and Surgeon*, in S. O. No. 118, May 22, 1889, from this office, is further extended four months on surgeon's certificate of disability.—Par. 14, S. O. 142, *A. G. O.*, Washington, June 20, 1889.

CORSON, J. K., *Major and Surgeon*.—Granted leave of absence for one month, with permission to apply for an extension of one month.—Par. 2, S. O. 65, *Headquarters Department of the Columbia*.

FISHER, WALTER W. R., *Captain and Assistant Surgeon*.—The leave of absence for one month granted by S. O. 30, c. s., Department of California, and extended fifteen days by Par. 3, S. O. 37, c. s., from these Headquarters, is further extended fifteen days.—Par. 1, S. O. 41, *Headquarters Division of the Pacific*, San Francisco, California, June 12, 1889.

By direction of the Acting Secretary of War, the following changes in the stations of officers of the Medical Department are ordered:

TEN EVCK, BENJAMIN L., *First Lieutenant and Assistant Surgeon* (recently appointed).—Ordered to Fort Leavenworth, Kansas.

GARDINER, JOHN DE B. W., *Captain and Assistant Surgeon*.—Relieved from duty at Fort Leavenworth, Kansas, and ordered to Fort Reno, Indian Territory.

WYETH, M. C., *Captain and Assistant Surgeon*.—Relieved from duty at Fort Huachuca, Arizona Territory, and ordered to Fort McDowell, Arizona Territory.

WOOD, LEONARD, *First Lieutenant and Assistant Surgeon*.—Relieved from duty at Fort McDowell, Arizona Territory, and ordered to the Presidio of San Francisco, California.

Par. 3, S. O. 132, June 8, 1889, so amended as to direct P. G. WALES, *First Lieutenant and Assistant Surgeon*, to report to Fort Huachuca, Arizona Territory, for duty, in place of the Presidio of San Francisco, California.—Par. 2, S. O. 138, *A. G. O.*, June 15, 1889.

By direction of the Acting Secretary of War, leave of absence for two months is granted to HENRY S. T. HARRIS, *First Lieutenant and Assistant Surgeon*.—Par. 13, S. O. 140, *A. G. O.*, June 18, 1889.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF THE MEDICAL CORPS OF THE U. S. NAVY, FOR THE WEEK ENDING JUNE 22, 1889.

BEARDSLEY, GROVE S., *Medical Inspector*.—Granted a year's leave of absence, with permission to leave the United States.

FEREBEE, N. M., *Surgeon*.—Detached from special duty at the Naval Academy, and wait orders.

ROTHGANGER, GEORGE, *Assistant Surgeon*.—Ordered to the Naval Hospital at Mare Island, California.

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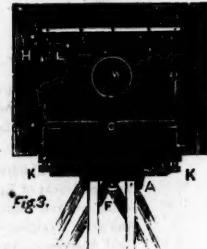


Fig. 3.

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CITY OF NEW YORK.

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